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THE CONNECTICUT STORY

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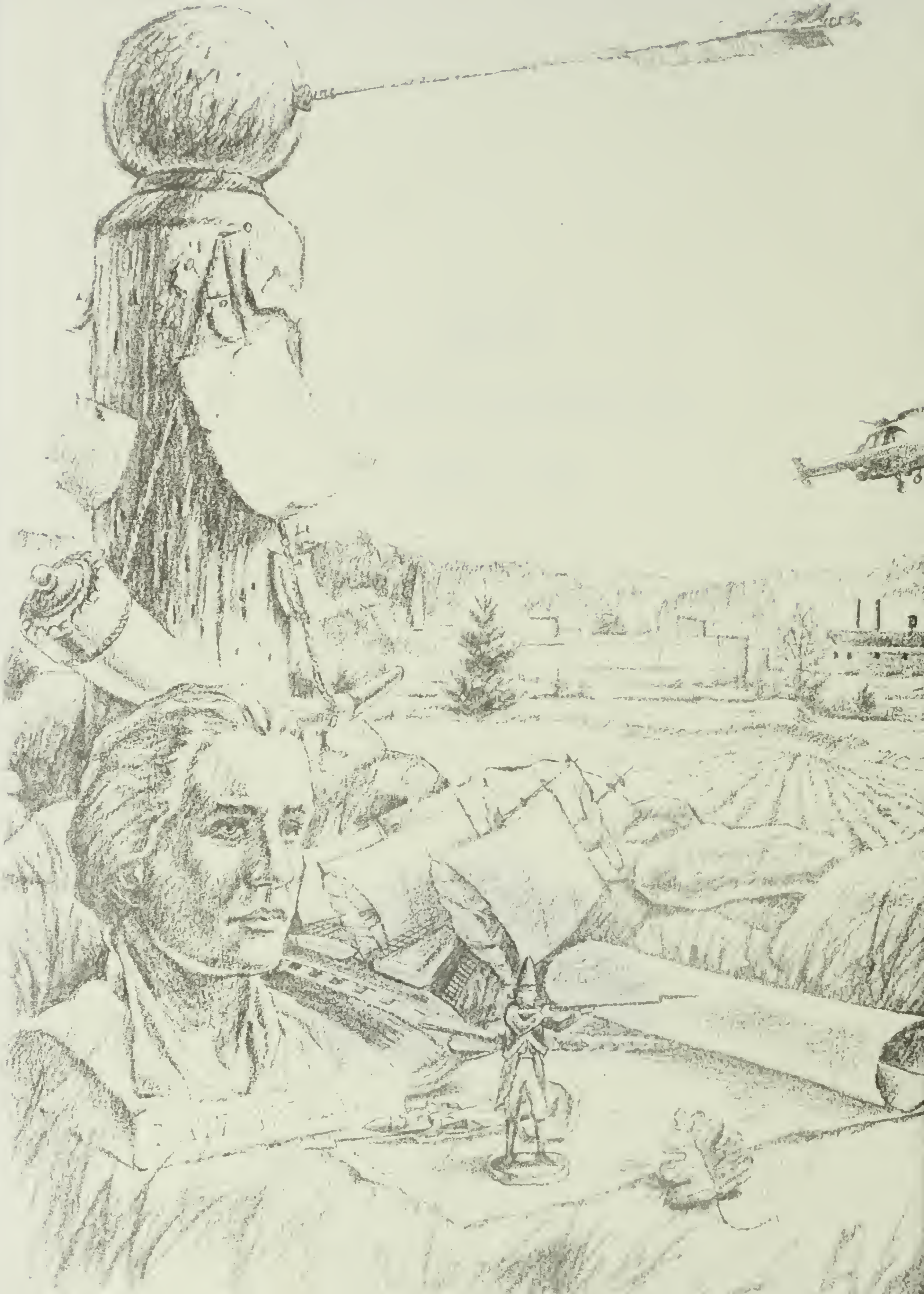

THE CONNECTICUT STORY

by

JOSEPH B. HOYT

Elliott H. Kone, *Editor*

RP-2

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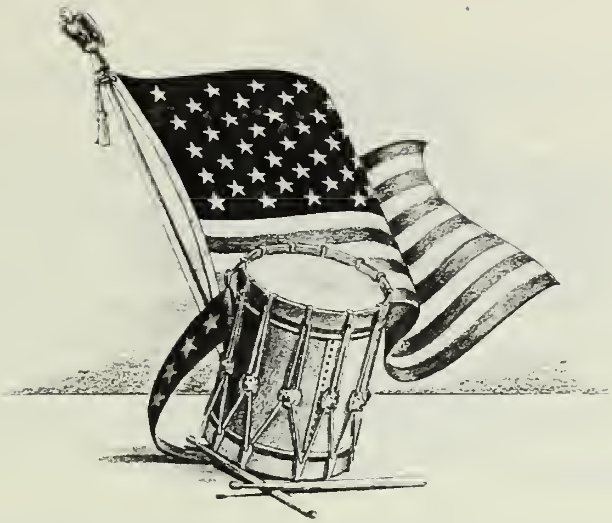

PREFACE

The Connecticut Story has a cast of characters and a locale as all stories do. The cast, however, numbers in the millions and the locale stretches from Greenwich to Stonington along the coast and north to the Massachusetts border. It covers 5,004 square miles. Some writers on Connecticut concentrate upon the people – they write character studies. The present book considers that both cast and locale are equally important. They influence and have influenced each other.

Millions of people during the past three and a quarter centuries have spent their lives in the state changing its landscape. They have cut down its forests and sown fields, built roads, canals and railroads, constructed dams on its rivers and buildings along the river banks and on numerous sites scattered over the hillsides. As a result of their efforts the Connecticut that exists today is largely man made. All of it has been modified from its pre-historic condition.

While Connecticut's residents have been changing the scenery to suit their own purposes, these physical resources have exerted a persistent pressure upon the people, influencing men's lives. The landforms, especially the distribution of land and water resources, have affected the way people have distributed themselves around the state. The varying population densities from sparsely populated hill regions to dense urban clusters reflect, in one way, man's reactions to differences in Connecticut's land resources. Cities do not grow haphazardly. Behind each city's growth lies an explanation that combines historical and geographic factors. This city developed around a good harbor, that one on a waterpower resource, and a third may have grown because of its proximity to other cities. But the growth or lack of growth of individual communities is only one aspect of the way Connecticut's environment has influenced her development.

It is impossible to completely understand Connecticut's history without knowing her physical geography. This is the theme of *The Connecticut Story*. It discusses the intricate interrelationships that develop between men and their environment, specifically the relationships that have evolved over 325 years between millions of men and women from varying cultural backgrounds and the land that is Connecticut.

The landforms, climate, soils, water, vegetation and animal resources, as well as the mineral wealth of Connecticut are described. This forms the geographic background. In addition the major events of Connecticut's political, economic, and cultural history are included. Together the two form a unit and explain the changing cultural landscape of the state.

The book has deliberately been written in simple language and contains only those technical terms which are essential in understanding the changes that have come. It may be used in upper elementary and Junior High grades. Adults will find it entertaining although there is no attempt to challenge their greater maturity and deeper knowledge.

J. B. H.

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Any writer on historical subjects owes so much to so many writers who have preceded him that it is difficult to acknowledge that debt. The formal historians who have written on his subject may be listed in a bibliography. The books on Connecticut which this author has found most useful are listed in the bibliography at the end of the text. But each of these writers has relied upon other writers who preceded them and who wrote on special aspects of our history. This debt may be followed back to the earliest chroniclers of our state. Every generation since the first in Connecticut has set down its impressions of life here. The diarists, letter writers, political pamphleteers, and biographers of the past three centuries have preserved a vast amount of material on our state. In recent years many others, journalists, business men, state employees of several departments have added current information to the file from which a writer draws his material. To all of these men and women the author wishes to acknowledge his debt.

There are several others whose help has been more direct: Miss Leonie Brandon encouraged the author in the early stages and has maintained a keen interest as the book has progressed; Mrs. Lionel R. Sutfin and ten other teachers and some three hundred students of the New Haven and Woodbridge schools read and criticized the first chapter; the artwork has been done by many artists under the able direction of Messrs. Stephen D. Rubelman and Irving Leveton of the R. & R. Art Production Service of Milford, both men have taken a personal interest in the book. To the editor, Mr. Elliott H. Kone, the author owes more than an author usually owes to his editor. His most enthusiastic interest, continuous encouragement and valuable criticisms have produced a better book than could have been written without him. Through the editor, Miss Florence S. M. Crofut has lent generously of her great knowledge of Connecticut's history.

ABOUT THE AUTHOR

Joseph Bixby Hoyt was born in Salem, Massachusetts where he got his early schooling. At Bowdoin College and in his early graduate study at Harvard University his training was in history and education. After receiving his M.A. from Harvard in 1937 he taught for five years in the Massachusetts public schools. During World War II he worked for Pan American World Airways and returned to education after the war as Director of Guidance at Southbridge, Mass. for two years. He then went back to college to earn a Ph.D. in Geography from Clark University.

Since 1949 Dr. Hoyt has been on the faculty of Southern Connecticut State College where he is now Professor of Geography and Chairman of the Social Sciences Department. His writings are in the area of historical geography: *The Cold Summer of 1816* and the *Historical Geography of Berkshire County, Mass.* He is the author of a college text on geography entitled, *Man and The Earth.*

To Martha, Bix, and Jonny — the best of companions. With them I have spent many happy hours exploring the backroads, hills, and forests of Connecticut finding fascinating relics of her past history.

THE
CONNECTICUT
STORY

THE LANDFORMS OF CONNECTICUT

Here three major forces that created our landforms are combined; the ice riding over the hills in the background, the volcanic eruption that gave us trap rock and the rivers that leveled the mountains.

CHAPTER 1

THE LANDFORMS OF CONNECTICUT

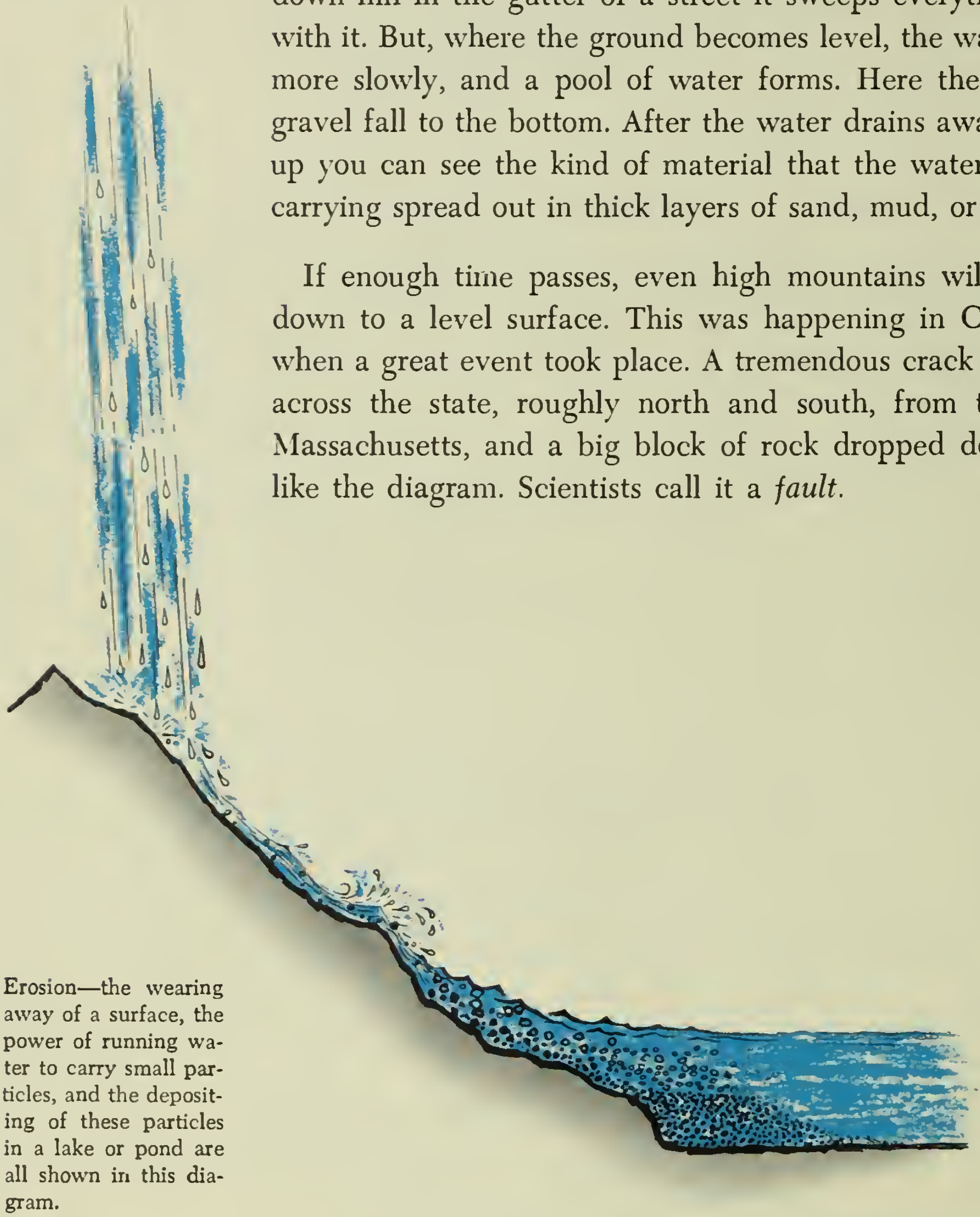
The story of Connecticut you are beginning to read has two parts, the place and the people. Either part can be studied alone, but to produce the whole story of Connecticut they must be put together. The story began before any people lived there. We must take a little time to describe what the land of Connecticut is like. Nevertheless, most of our story will be about the people: the Indians, the English and other first settlers, and the later arrivals. It will tell about the way they lived in this state.

1. *The Land and Its Formation*

If you look around you in Connecticut you will see many different land and water forms. These include hills and valleys, flat areas called plains, rivers and lakes, and off to the south, the ocean. Many, many years ago these landforms were quite different. Some of the hills were higher, often very much higher. We could call them mountains. Over the many years that have passed they have been worn down by several forces to the sizes and shapes one can see today. Some of these forces you may already know about, others will be new to you and you will learn about them as you read further. It is an interesting scientific story.

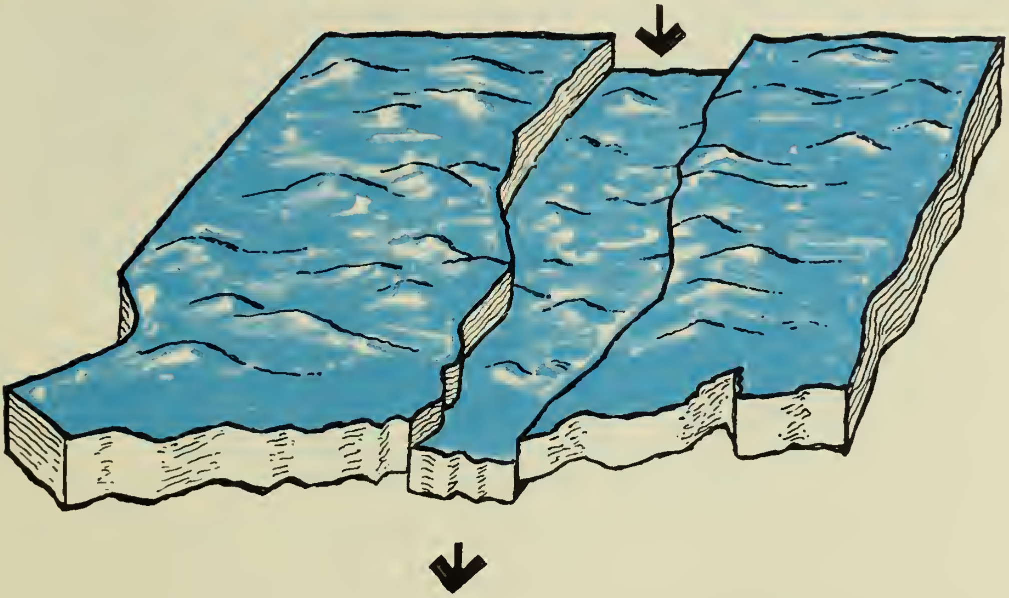
Back many thousands of years ago, when the world was young, the mountains of Connecticut rose thousands of feet into the air. As rain fell producing brooks and rivers, the flowing waters wore away the surface. Rapidly flowing water has a lot of power to wear away rocks, and it carries away small particles of them. When the speed of the water in a river slows down, these particles are dropped in the river bed. After any rainstorm you can see this happen. As the water flows rapidly down hill in the gutter of a street it sweeps everything along with it. But, where the ground becomes level, the water moves more slowly, and a pool of water forms. Here the sand and gravel fall to the bottom. After the water drains away or dries up you can see the kind of material that the water has been carrying spread out in thick layers of sand, mud, or gravel.

If enough time passes, even high mountains will be worn down to a level surface. This was happening in Connecticut when a great event took place. A tremendous crack developed across the state, roughly north and south, from the sea to Massachusetts, and a big block of rock dropped down much like the diagram. Scientists call it a *fault*.



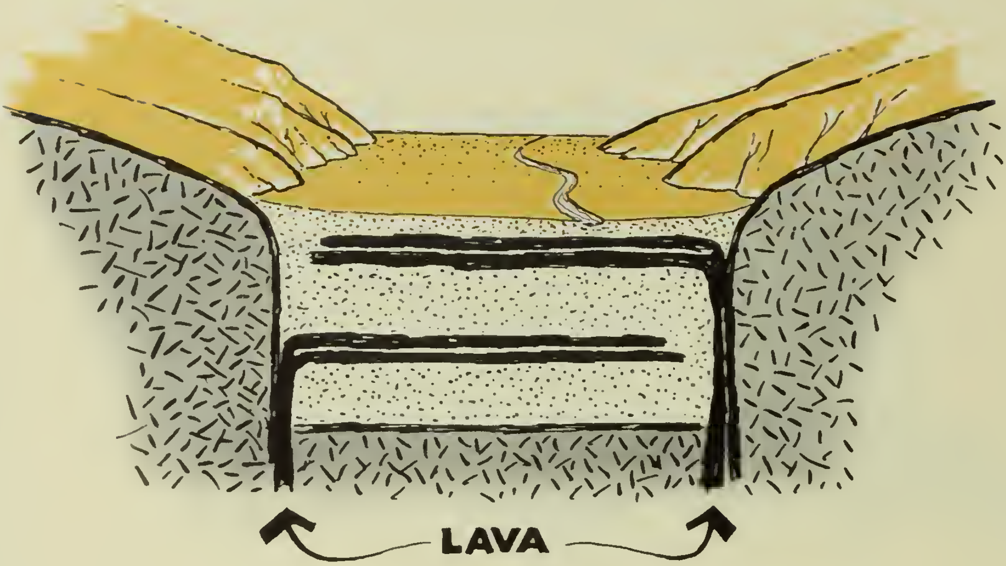
Erosion—the wearing away of a surface, the power of running water to carry small particles, and the depositing of these particles in a lake or pond are all shown in this diagram.

After this happened a long period passed while the rains continued to fall. Much of the upland, the higher portions on both sides of the crack, was washed down into it, filling it with great layers of sand. From time to time, new cracks appeared in this big valley and volcanoes burst forth, throwing out red hot rock (lava) that spread in thick layers on top of the sand. Then the volcanoes would quiet down and very fine particles of clay, sand, and gravel would be washed down and spread out on top of the now cooled lava. See diagram on page 20.



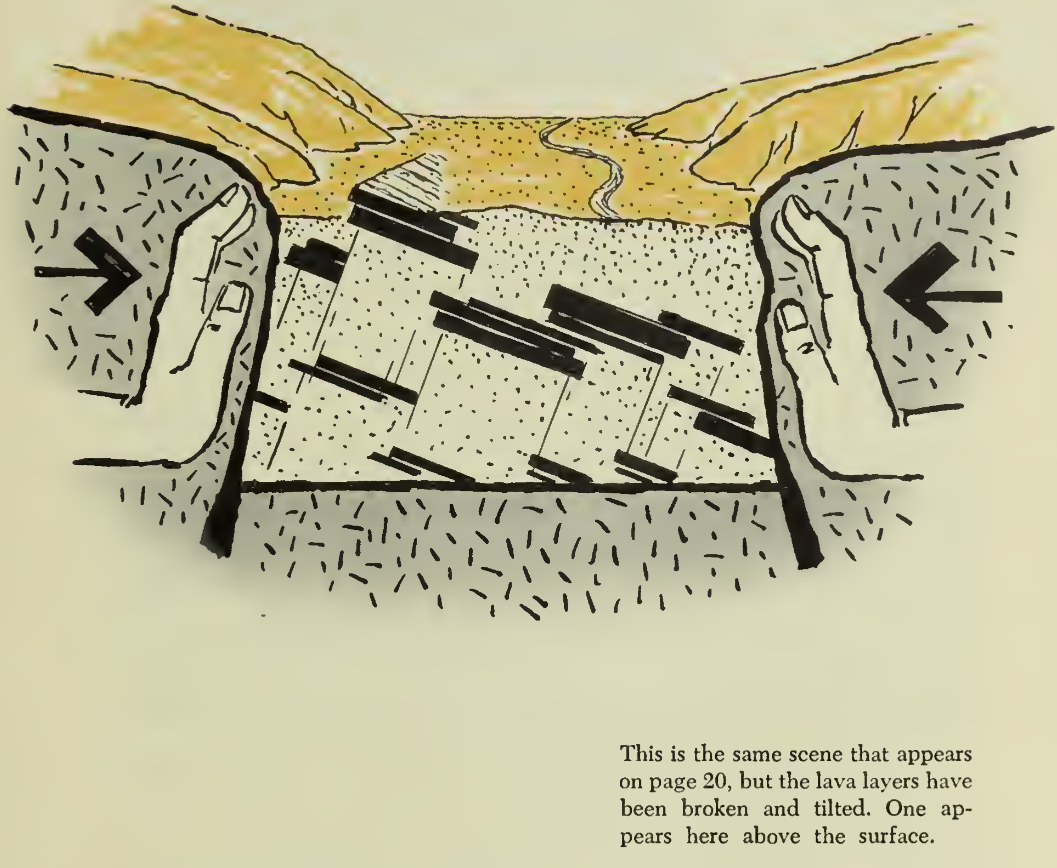
Above is a diagram showing how the central valley of this state was formed by a down-dropped block.

A sort of sandwich with many layers was produced, as you see. The dark layers are called trap rock in Connecticut. They were once red hot and flowed like water. The lighter sections in the picture are layers of sand, gravel or clay. These three words mean different bits of material of different sizes. You all know what sand is like; gravel is made up of larger particles, but the particles of clay are so small you can hardly see them.



Here the central valley has been filled with sand and gravel particles brought down by rivers flowing from the upland on both sides. The lava came up from below along the cracks of the original fault.

Next a new force appeared. This was a squeeze that brought the sides of the valley closer together. If the rocks in the valley had been soft they would have crumpled up as you can crumple a piece of paper. Instead they were hard and they broke, one piece sliding up on top of the other as you see here.



This is the same scene that appears on page 20, but the lava layers have been broken and tilted. One appears here above the surface.

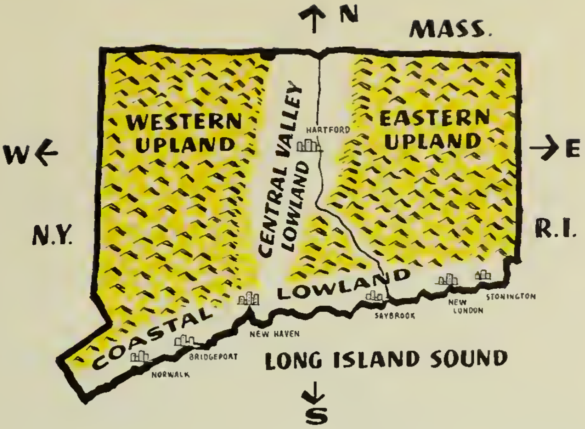
Of the three kinds of rock in the valley: the sandstone, shale made from clay, and the traprock, the sandstone was the most easily worn away under the influence of running water. Eventually the valley began to look the way you see it today. The rivers wore out their valleys in the soft sandstone and the trap rock was left standing up as a series of long hills. Some of their names are West Rock and East Rock in New Haven, Hanging Hills, Mt. Lamentation in Meriden, and Talcott Mountain in Farmington. There may be a trap rock ridge near to you. If so try to visit it and collect samples of sandstone, shale or trap rock. Notice how hard the trap rock is. It is used to make roads today.

This sketch shows West Rock, New Haven from the south. It is a trap rock ridge created as the diagram on page 21 shows.

A similar crack appeared in a small valley, the Pomperaug, in the western part of the state, in Woodbury. It shows today the same sandstone, shale, and trap rock layers that are found in the central valley. Most of the rest of the state is made up of old rocks like granite. These rocks are very hard and the valleys that rivers have carved in them are steep and narrow, not broad and gentle as the upper Connecticut valley. Compare on your map the upper Housatonic valley with the Connecticut valley.

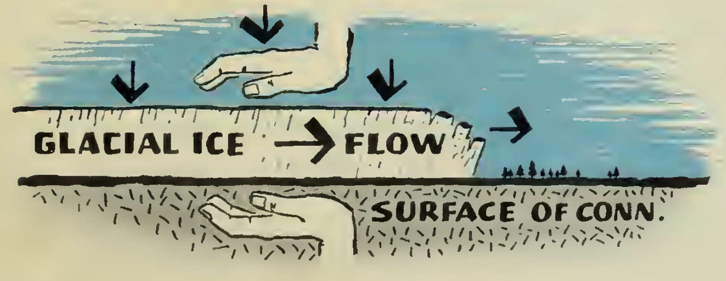
If you travel along the lower Connecticut valley to the sea you may notice the difference between the valley near Hartford and the valley near Haddam. The lower valley is much narrower. See the diagram on page 23. It is carved in the hard granite-like rocks, not in the soft sandstones. What we have called the central valley, with its sandstones and trap rocks, continues southwest through Meriden and Wallingford to New Haven. The river leaves the central valley at Middletown and winds its way across the old rocks to the sea.

In this simplified diagram of the state's landforms the contrast between the valley of the middle and lower Connecticut River shows clearly.



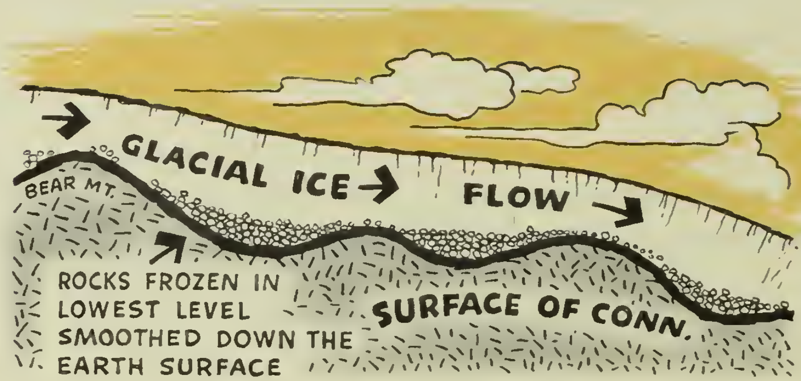
One other kind of rock is found in Western Connecticut. This is limestone. It is produced by limey materials deposited in the sea that once covered this area. Such rocks can be found from Danbury north along the Housatonic River into Massachusetts. They are very useful. Blocks are cut out of the hills and used for building purposes or are ground up to make lime which is used in plastering the walls of our houses. Lime is also used in agriculture.

The last big event in making the present land surface was the ice age. Many thousands of years ago the climate began to get colder. It became so cold that to the north in Canada, the snow that fell during the winter period did not all melt in the following summer. Year after year the snow piled up higher and higher. Finally in the lower levels the snow became ice by being squeezed together, much as you can squeeze a snowball into ice. When this happened the lower levels of the ice which were under great pressure began to move. You can understand how this happened if you remember the last time you put too much jelly in a sandwich. Then, when you bit into it, your teeth put pressure on the outside layers and the jelly was squeezed out. The ice was squeezed out in the same way.



The upper hand stands for the weight of the ice pressing down against the unyielding earth which is shown by the lower hand—the arrows show how the ice was squeezed out.

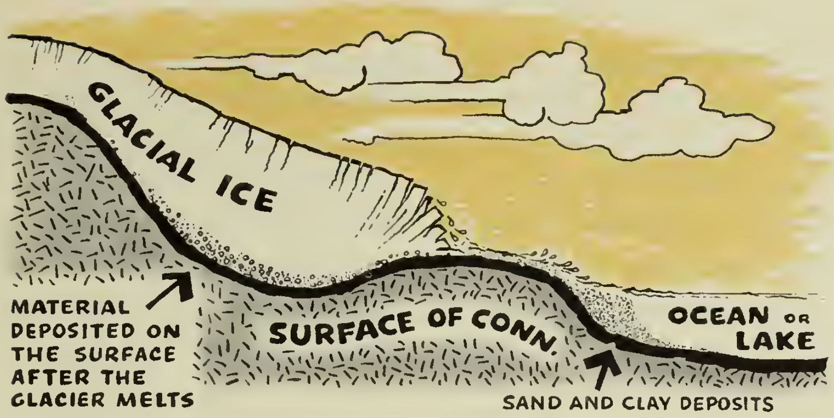
The ice moved very slowly, only a few feet a day, but it kept coming southward as more and more snow and ice piled up. As it came it rode up over the hills in its path. At its furthest point of advance, all of Connecticut was covered and the edge of the ice lay on Long Island. The ice pushed ahead of it or picked up all of the loose material in its path. Some rocks were frozen into its lowest levels and acted like a piece of very coarse sandpaper, smoothing down the rocky surface. Many times deep scratches were made that can be seen today. Although the glacier, as the ice sheet was called, did make some changes in the surface of Connecticut, all the larger hills and valleys were here before the glacier.


GLACIAL ICE
FLOW
BEAR MT.
ROCKS FROZEN IN LOWEST LEVEL SMOOTHED DOWN THE EARTH SURFACE
SURFACE OF CONN.

The southward movement of the ice sheet climbing over the hills.

Eventually the summers became warmer and the glacier began to melt. It took a long time for all of the ice to melt. Scientists think that it was perhaps 500-800 feet thick over Connecticut's southern part and much thicker further north. As you could guess, melting produced great rivers of water which flowed from the ice sheet, carving the valleys deeper and carrying large quantities of clay and sand down to the sea. Some of it was dropped along the way in the lakes that filled most low spots in Connecticut after the glacier melted. Such deposits are widely scattered around the state.

The clays are used in making bricks and are found at many locations in the Quinnipiac and Housatonic valley. Sand deposits are even more widely distributed. Many of them are being used today to supply sand and gravel used in building. If you can visit a sand deposit, you may see the several layers

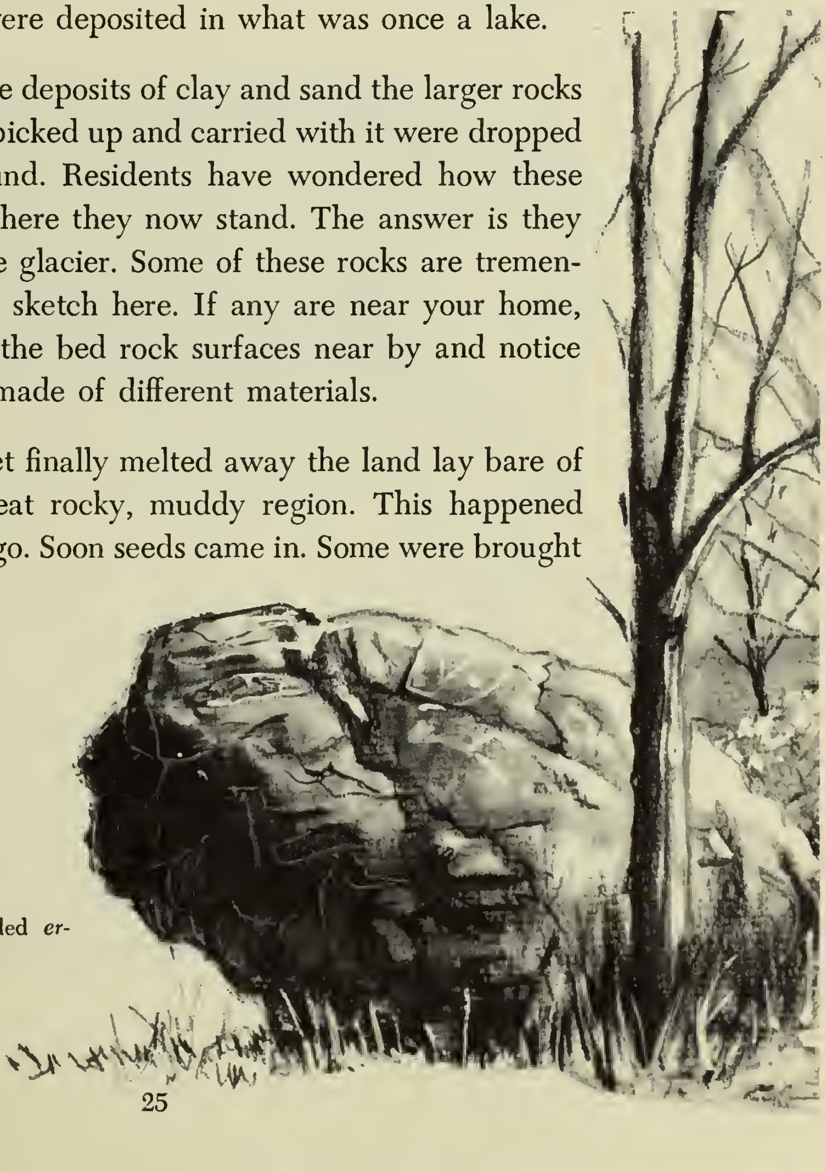


The melting ice sheet left behind it the material that forms much of our present day surface and supplied the sands, clays and gravels that filled many little lakes.

of sand that were laid down year after year as the ice sheet melted back. A visit to a brick yard will show you the yearly layers of clay that were deposited in what was once a lake.

In addition to these deposits of clay and sand the larger rocks that the glacier had picked up and carried with it were dropped directly on the ground. Residents have wondered how these great rocks got to where they now stand. The answer is they were dropped by the glacier. Some of these rocks are tremendous in size like the sketch here. If any are near your home, compare them with the bed rock surfaces near by and notice that they are often made of different materials.

When the ice sheet finally melted away the land lay bare of all vegetation; a great rocky, muddy region. This happened about 10,000 years ago. Soon seeds came in. Some were brought



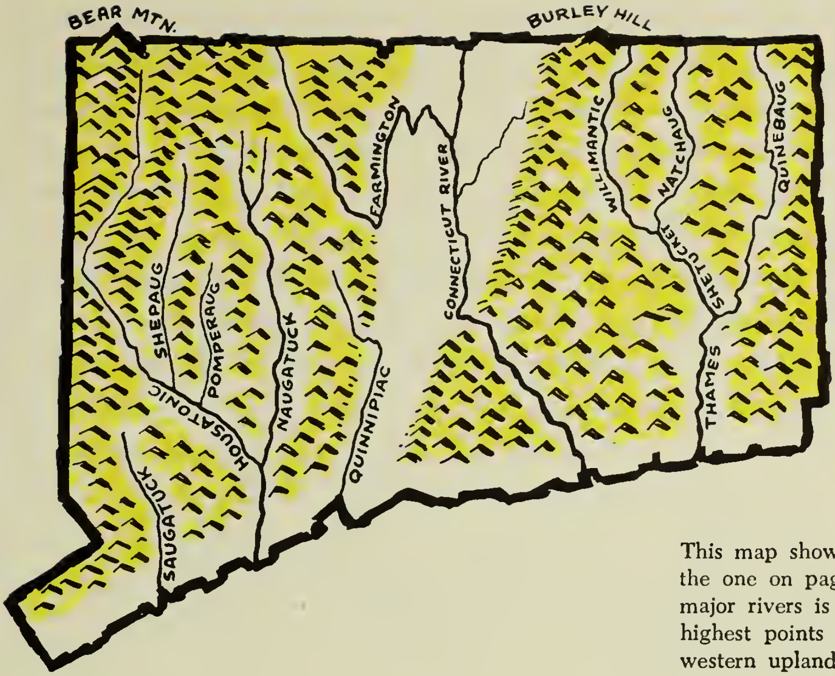
These large rocks are called *erratics* by scientists.

by birds and some were blown by the wind from New Jersey and neighboring regions that were never covered with ice. Other seeds that had been buried by the ice and had slept during the long ice age began to grow with the warmer temperatures. In a few thousand years Connecticut again had a cover of plants, and the birds and animals came back. The present surface and cover of plant life is the result of all these changes.

WIND
N.J.
SEED CARRIED BY BIRDS
SEEDS BLOWN BY THE WIND FROM OTHER STATES
SLEEPING SEEDS FROM THE ICE AGE

Three sources of the seeds that produced Connecticut's first vegetation forms after the ice departed are shown here.

The present landforms of Connecticut are easy to learn. There are four parts, as may be seen on page 23. A low coastal strip only a few miles wide extends along the seacoast from New York to Rhode Island. It is the edge of the old rocky surface broken by many small rivers and three large ones, that have carved out valleys which today reach to the Sound.



This map shows more detail than the one on page 23. Each of the major rivers is named, as are the highest points in the eastern and western uplands.

Some valleys form harbors, the best known are Bridgeport, New Haven, Saybrook at the mouth of the Connecticut River, and New London on the Thames River. Many smaller harbors also are found along the coast. Because the coastal area is relatively level it makes a smooth surface on which many of the first settlements were begun and along which roads and railroads have been built.

Behind this narrow coastal strip rises the hilly old land mass of Connecticut, broken in two by the central valley. On the west, the hilly upland is made up of many small hills and valleys and rises to its highest point, 2,315 feet at Bear Mountain, in the Northwest corner. There is a trail to the top of the mountain and, from the peak, you can see far into New York State and up into Massachusetts. On very clear days you can see Long Island Sound. There are many other hills and mountains that are lower but which also give interesting views. In the western upland the major rivers are the Housatonic and its largest tributary the Naugatuck. Other tributaries are the Shepaug and Pomperaug. Smaller rivers flow directly into the sea from the lower hills near the New York State line.

The Central valley is different from the uplands on both sides in several ways. Most of it is quite low, only about a hundred feet above sea level on the Connecticut River near Massachusetts. Within the valley are a number of trap rock ridges that rise higher. Some of these have trails on which you can take pleasant Sunday afternoon walks. Most of the rest of the rocks of the valley are shales and sandstones. The Connecticut River flows through the northern two-thirds of the valley, but breaks out of it at Middletown and crosses the eastern upland on its way to the sea. Because the valley is generally level and because the river was an easy route to travel, the very first settlements were made in the broad flat lands at Wethersfield, Hartford, and Windsor. At one place, the valley of Roaring Brook in Southington, you can follow up the stream to the west and see where sandstones lie on top of the part of the old land mass that sank down.

The lower rocks behind the boy are part of the old block that dropped down. On top of them lies sand deposited by the rivers flowing from the uplands and made into sandstone rock by pressure.

East of the central valley the old land mass rises in the eastern upland. This is another hilly region cut by many river valleys, most of them tributary to the Thames River. It is not as high as the western upland. Burley Hill, 1,315 ft., in Union, almost on the Massachusetts line, is the highest peak. The major rivers are the Willimantic, Natchaug, and Quinebaug. The first two join at Willimantic to form the Shetucket River. The Thames is the name we give to the combined waters of the Shetucket, the Quinebaug, and the Yantic Rivers which come together in Norwich. It was quite natural for the Englishmen who settled at the mouth of this river to call their home New London and to name this river after the one that flows through the city of London in England.

This, then, is the land of Connecticut. It is not very large, only about 100 miles east and west along the Sound and 50 miles north to the Massachusetts line from the ocean. Its area is 5,004 square miles, counting the lakes. On the other hand, its hills and valleys produce an attractive and varied landscape and it is full of many interesting places to explore. As you read on you will learn about many hikes and drives you can enjoy with your parents and friends.

THE INDIANS OF CONNECTICUT

CHAPTER 2

THE INDIANS OF CONNECTICUT

For a few thousand years after the glacier had melted, while the plants and animals were coming back, Connecticut was a peaceful place. Bird cries and animal sounds and the rustle of leaves were all that broke the quiet. The fish swam undisturbed in the lakes and streams, and the deer walked through the forest without fear. There were no humans.

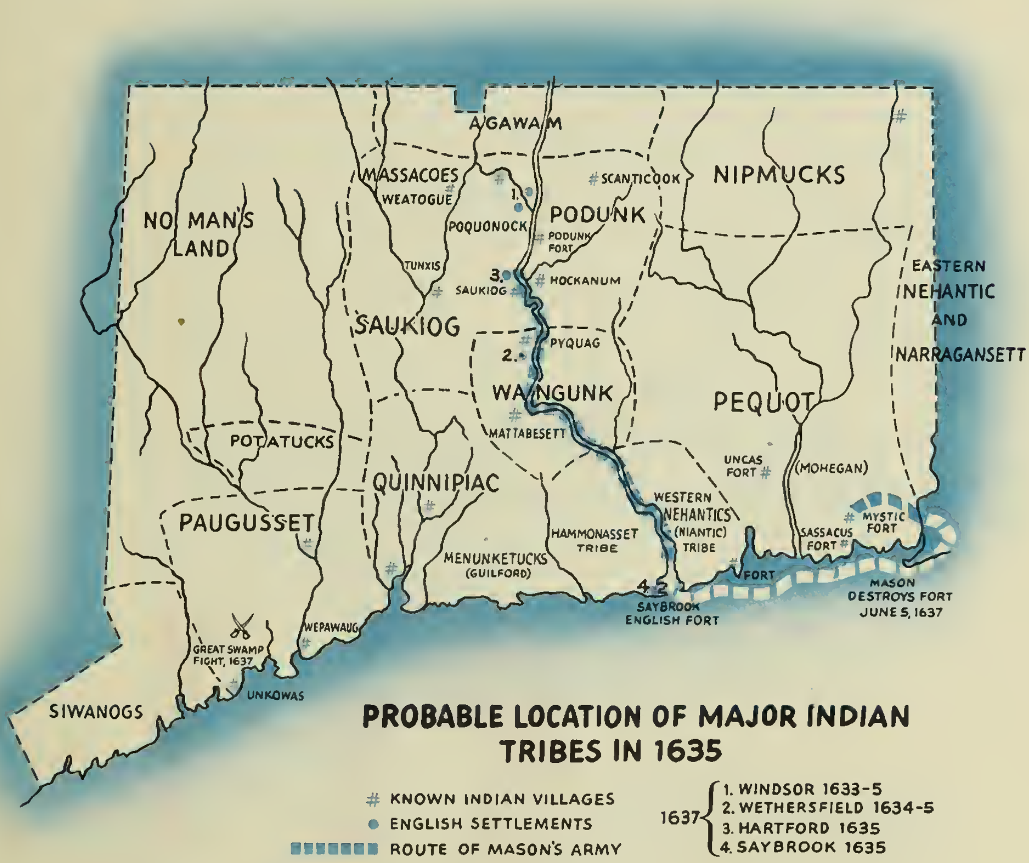
The most important events were the arrival and passage of the seasons. As the days became longer in March and April, the snow melted, filling every brook and river to overflowing. Spring's arrival was marked, as it is today, by the coming of robins and the appearance of shad in the rivers. With summer came hot, lazy days punctuated by thunderstorms. In late September the first cool nights warned animals and plants that winter was on the way. Many birds flew south, though a few stayed here all winter. The animals began to store up food for the cold season which was to come. The trees began to paint their leaves with brilliant colors to celebrate the harvest season. When October departed and the cold, raw winds of November began to blow, those animals who planned to sleep during the winter sought their dens. By early December the first soft, white blanket of snow was the signal for bedtime. Most of the animals and plants snuggled down for the long winter. Both would wake with the arrival of warm weather in the spring.

The first humans to disturb this peaceful scene were Indian hunting parties moving quietly through the forests in search of game. They may have come in small family groups of father, mother, and half-grown children. Or perhaps an entire tribe of many families arrived first. We know they came from the west about three or four thousand years ago and settled down in this rich hunting and fishing region. As the years passed, more tribes came and the numbers of Indians grew. By the time the whites arrived there were about 6,000 Indians here, divided into a number of tribes.

Every Indian boy was trained by his father to become a hunter, the girls were trained by their mothers in skills they needed to know.

The first Indians were not farmers. They got their food by hunting or fishing or by collecting wild fruits, berries and nuts in the forest. The farming Indians came later, before the white men came. When the English and Dutch arrived in Connecticut all of the Indian tribes knew how to cultivate plants. The white settlers borrowed a number of these plants from them. Corn, beans, squash, and pumpkins were the most important vegetables; in addition there was tobacco. Each Indian village was surrounded by small cornfields that were cared for by the women and children. But only the men were allowed to cultivate tobacco.

The Indians lived along the coastline and in the river valleys. The hilly forested regions were used only as hunting grounds. They chose the locations for their villages as carefully as did the white men who came later. The ocean and the rivers supplied them with fish and shellfish, such as clams and oysters. These shellfish were one of the most valuable food resources. They couldn't swim away and even small children could help to collect them. Another reason for settling along the coast and in the river valleys was that the Indians wanted level land for their cornfields. The first whites to come to Connecticut wrote down the names of the different groups of Indians. These names are given on the following map which shows all of the larger Indian tribes and where their tribal lands were located. Many of the names are still in use today.



The map shows Connecticut from the earliest English settlements to the Pequot War. The dates of the English settlements are given below the map.

For students, Indian names are often hard to remember and even harder to spell. It may be some comfort to know that the first settlers had a still more difficult time with these names. Since the Indians had no written language, they didn't need to know how to spell their own names, all they had to do was to speak the words. It was easy enough to say the Indian names. Spelling them was harder. The English had several different spellings for each of these names at first. Only after they had used these words for a long time did they settle upon one correct spelling for each.

Indian Life

Most Indians lived in small houses that were made of poles stuck in the ground, bent over, and tied together at the top. The framework of each was covered with large pieces of bark or bundles of long grasses, making what we call a *thatched* roof. The floor was hard packed earth. In winter, the hut was heated by a small fire located in the center. The smoke escaped through a hole in the roof. People who lived in them considered them to be quite warm and snug. The Indians made beds which they covered with animal skins for bedding. They did not have any chairs or tables. Their utensils were simply made wooden bowls and spoons, birchbark dishes and pails. Some of the latter were so carefully made that they held water.

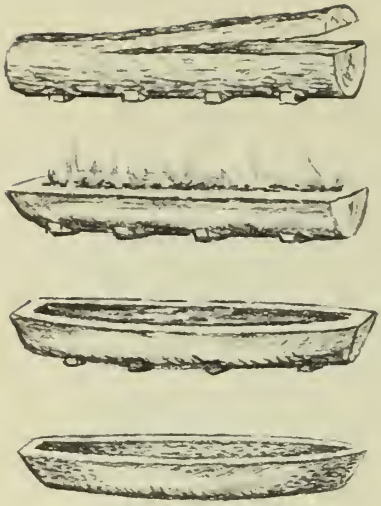
To grind their corn they used stone bowls with stone *pestles*. The women were very clever in weaving large baskets for

A small child gets her first lesson in preparing food. The Indian mother is using a pestle to grind corn in a stone bowl.

storage. A few of these implements and utensils can be seen today in museums around the state.

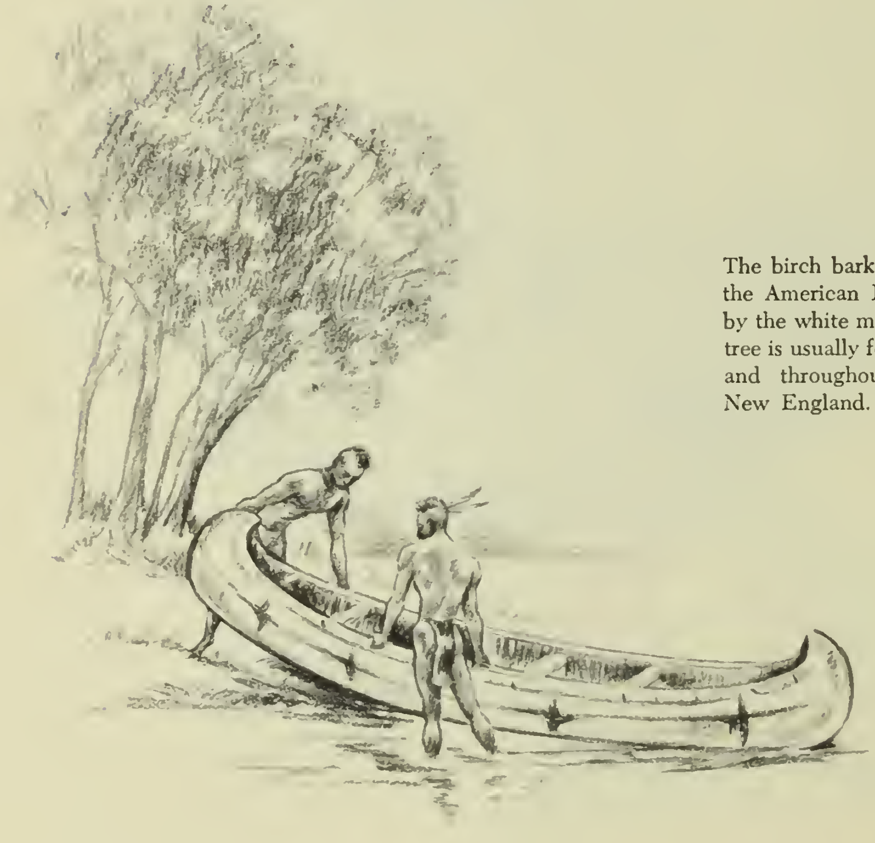
Usually the houses were built close together and often surrounded by a wall of tree trunks sunk into the ground. The wall made the village into a fort. Several of these Indian forts are located and named on the map on page 33. These were their permanent homes but they often had other houses to which they moved at special seasons. Springtime was the season to camp along the rivers to catch shad or eels. In the summer some Indians went to the seashore where they collected shellfish. The Indians frequently had both summer and winter homes just the way some present families do. Indian children probably looked forward to going to the shore as today's young people look forward to their vacations. Although the Indians did not

In the foreground is a bark covered Indian hut and behind it the wall of their fort. There were other kinds of houses built by other tribes.



The several steps in making a dugout are shown here. They were heavy and clumsy but were widely used where birth bark was not available.

have sailboats and motor boats, they did make two kinds of canoes. One was a great log, hollowed out by burning and chopping. It was called a dugout. Some of these were 30-40 feet long and carried many men. The other type was the birch bark canoe, very much like our canoes today. Ours were copied after the Indian canoes.

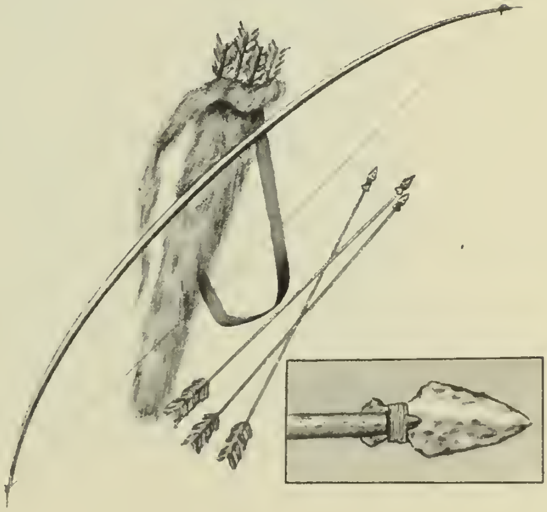


The birch bark canoe, invented by the American Indians, was copied by the white men. The paper birch tree is usually found in Long Island and throughout New York and New England.

Three young Indian hunters view an English settlement on the Connecticut River flood plain. Note the stone tomahawks which were used before the whites came.

Food was a constant problem. Hunting took most of the time of the men and boys. Even though they spent many hours in the woods looking for game, they didn't always find it, nor did they always hit every animal they shot at. Perhaps you may have an arrowhead. They often turn up in Connecticut fields. Each one was probably lost on a hunt long ago when the arrow missed its target. In the years that have passed since that day, the wooden arrow and the bindings that held the point have rotted away, leaving the stone point behind.

Their vegetables were planted and cultivated by the women and the younger children. When the corn was ripe it was collected and dried in the sun. Then the kernels were scraped

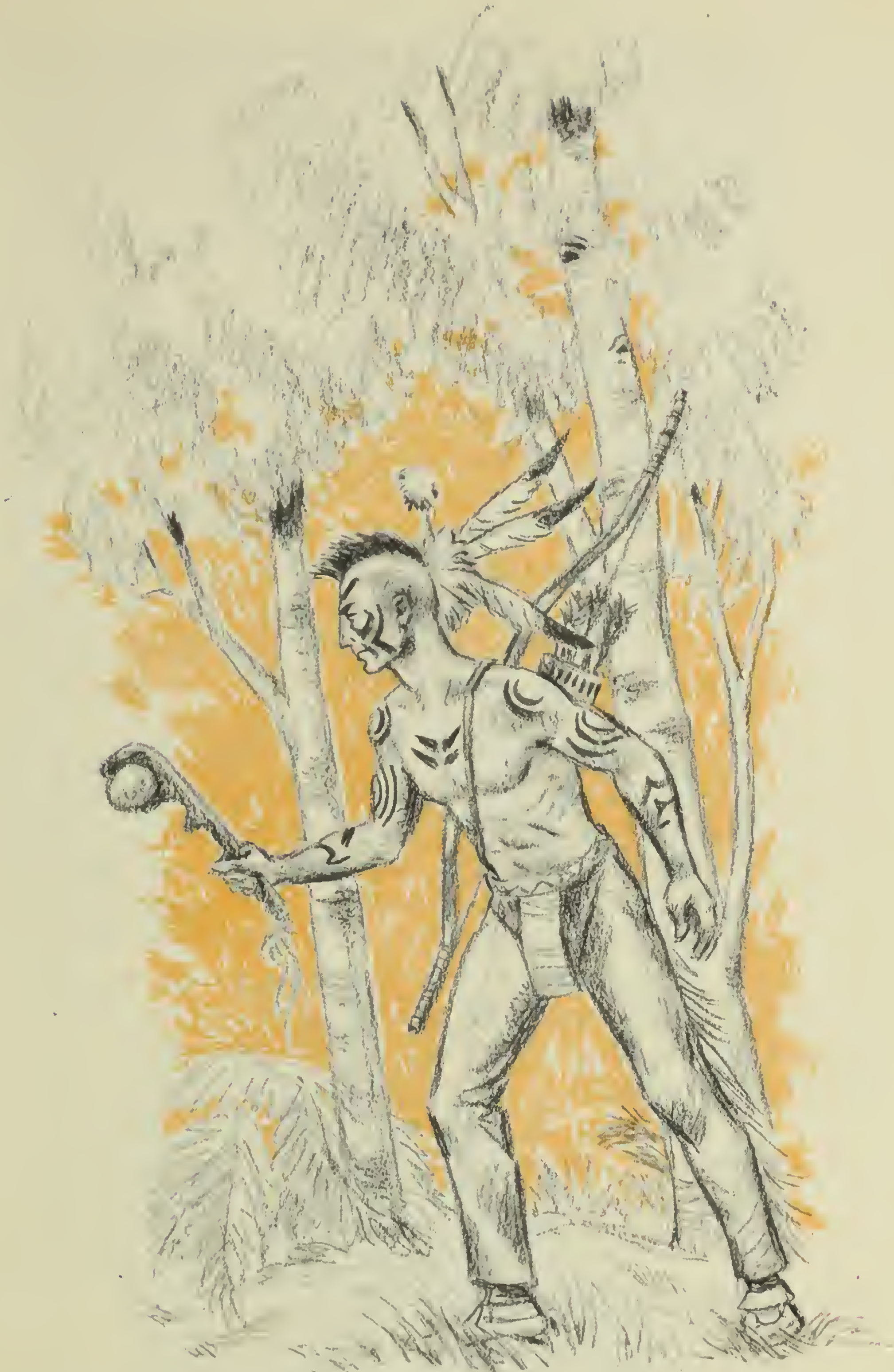


An Indian bow and arrow with a closeup showing how the arrowhead was tied onto the shaft of the arrow.

from the cob and packed in large baskets that were buried in the ground for safekeeping. Wild berries and nuts were also gathered in season and saved for the winter. Fish were caught in several ways: in nets or traps, with hooks, or speared as they swam through the water. Shellfish could be collected at low tide. Every one in the Indian family shared in the job of gathering food. The principal dish was corn and beans mixed together in a form called succotash. If they had meat or fish it was added to the stew.

Although the Indian houses were different from ours, and few of us get our food by hunting or farming, in some ways their lives were more like our own. They had games like our card and dice games and they loved to dance, but men and women did not dance together as we do. They danced separately, either in long lines or in a circle. In bringing up children, the Indians were very kind and easy-going parents. Children were seldom punished physically; instead, they were talked to and shown where their behavior was wrong. They believed in one God, whom some tribes called Manitou. They also believed that there was an evil spirit which caused all of their troubles.

Most of the Indians behaved themselves, although tribes did fight with other tribes. Murder was almost unknown among them. They had different ideas about stealing than we do. They would not steal from other members of their own tribe, but they did not consider taking things from the whites or from other tribes as stealing. This meant that the whites had to keep a sharp lookout when the Indians were around, because, as one white man put it, "they would take anything that wasn't fastened down." They didn't have our table manners. They would stuff themselves if food was available in large quantities. It is hard for us to realize how much they could eat. An Indian once said that a turkey was a very inconvenient size; it was too large for one man to eat but not quite large enough for two. The whites who made friends with the Indians found them very likable people who were hospitable and would share their last scraps of food with their guests.



An Indian painted for war. The paint on his face was carefully put on; each warrior had his own special symbols. Note the war club.

All of the Indian tribes were warlike. Every boy trained to become a warrior, and every man was one. Their hunting gave them the skills a warrior needed. These were the ability to run noiselessly through the forest, to shoot arrows swiftly and accurately, to travel for many miles without stopping, and to endure hardship, cold, wet, hunger, and pain without complaining.

Although all of the Indians were accustomed to fighting, some were better warriors than others. The most warlike were the Pequots. This tribe had come into Connecticut from New York State only a few years before the whites arrived. They conquered the river tribes and took the land along the seashore from the Nehantics. This was the territory they occupied in 1635. All of the river and coastal tribes had to pay tribute to them. (Tribute is a payment that a bully forces weaker people to give under the threat of harm if they refuse to pay.) When the Dutch and English arrived, the river tribes welcomed them as a protection against the Pequots.

Most people wondered how the Indians and whites got along at first and were puzzled by the way the Indians sold their land to the white man so readily. In the beginning the two groups were friendly. Indeed, the Saukiog, Podunk, and Wangunk tribes asked the English and Dutch to settle among them. They wanted protection from the Pequots, and they got it. A second reason for wanting the whites to come was the many wonderful things that the whites had. The Indians wanted the guns, steel hatchets and knives, the iron hoes, warm blankets, colorful coats, and the beautiful beads that the whites had for sale. Better yet, from the Indian point of view, the whites were willing to give these wonderful things for furs that the Indian could trap in the woods, or for corn that he grew in his fields. And best of all, the Indian chief could get beautiful presents just for signing a piece of paper that said the whites could build their houses near his village.

The Indians must have thought the whites were very polite people. Before the whites built their homes in the Indian country they would give the Indians who lived there presents of blankets, coats, knives, guns, and beads. You and I know the whites were buying land, but the Indians didn't think of land in that way. It wasn't something you owned. Rather it was something you used. They thought of land as being like air, free to all. You don't object to someone coming up to you and breathing the air around you. When the Indians sold the land they looked on the sale as you would if someone came up to you and gave you a present so that he could breathe the air near to you. The Indians expected to go on using the land that they sold, just as you would expect to continue breathing. What they did not expect was that they would ever have to leave the lands which they sold.

Even after they learned how the English planned to use the land, there was so much land left in their country that they kept on selling it to the whites. They had no idea how many whites there were, or how many were going to come to Connecticut. What eventually happened, as you well know, was that so many whites came to the state that the Indians were crowded out. But this was to take a long time, and no one, Indian or white, could look that far ahead. In 1635 there were only a few hundred whites in Connecticut and about ten times as many Indians.

Manufactured goods from England were easily traded to the Indians for land.

Although the river tribes welcomed the arrival of the English, one tribe was not too happy. This was the Pequot tribe. They liked to trade as well as the other Indians, but they knew when the whites settled on the Connecticut River that their control of the river Indian tribes was ended. Trouble soon came, although it wasn't entirely the fault of the Indians.

Two years earlier, men in a Dutch ship trading with the Pequots had killed one of the Pequot chiefs, a sachem, as the Indians called them. A few months later, the Pequots killed Captain Stone, an English trader. They claimed that they couldn't tell the difference between the Dutch and the English.

Captain Stone went from village to village along the southern shore of Connecticut trading with the Indians. In this scene he and his crew are being attacked by the Pequots off Mystic, Connecticut.

This trouble was smoothed over by a treaty that the Pequots signed with the Massachusetts Bay Colony. But, in 1636, one of the first English settlers of Connecticut, John Oldham, was murdered by some of the Indians who lived on Block Island. The people of Massachusetts thought that the Indians needed a lesson and sent a small army to find the murderers. When the army landed on Block Island the Indians hid, so the whites burned the Indian village and cornfields. The Massachusetts army then decided to teach the same lesson to the Pequots because of their murder of Captain Stone. The army landed on the Connecticut shore near the Pequot fort, in Groton. When these Indians also fled, the army destroyed everything the soldiers could lay their hands on: wigwams, canoes, and the cornfields. They then returned to Boston.

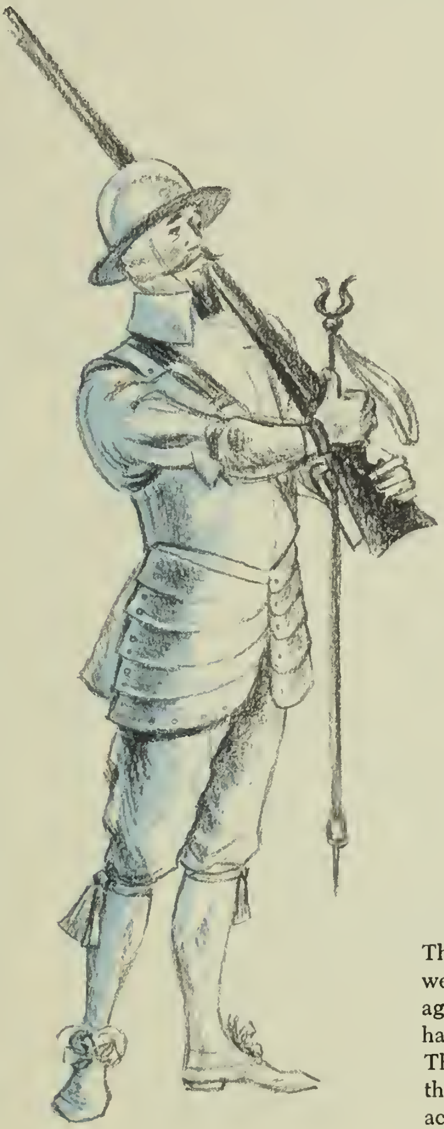
The damage done by the army made the Pequots very angry. As soon as the army had gone, they began to attack the nearest English settlement, the fort at Saybrook. Their war parties were not strong enough to capture the fort, but they hung around it all that winter, attacking any settlers that came out. Eight members of the tiny garrison were killed outside the fort in the next few months. When spring came the Pequots sent a war party against the English settlement at Wethersfield, some distance up the river. The people here were warned of the approach of the war party, but they did not believe that the Indians would attack them and were unprepared. Three women and six men were killed and two girls were captured. The girls were not badly treated. The Indians wanted the girls to teach them how to make gun powder. A few days later the girls were ransomed by a Dutch trader who came by. But, in the meantime, the war had begun.

No white man who stepped outside of the fort at Saybrook during the winter of 1636 was safe. Here one foolish white hunter has been surprised by a couple of Pequot warriors.

The fort at Saybrook may have looked like this. It was located on the west bank of the Connecticut River. Anchored off shore is a small ship. Here the first blood was shed in the Pequot War.

As soon as the settlers in Hartford heard about the attack on Wethersfield, they sent word to the Massachusetts Bay Colony and Plymouth Colony asking for help. But, even before they heard from these larger colonies, they started to collect an army. To understand this war you need to realize how few English there were in Connecticut in May, 1637. Look at the map on page 33. There were only four tiny settlements. These were the fort at Saybrook, garrisoned with 30 men; a small village of perhaps 150 people at Wethersfield; a larger settlement of about 400 persons at Hartford; and in Windsor, two villages located across the Farmington River from each other, with a total population between them of almost 300. The male population, old enough to carry arms, may have been about 250. The Pequot tribe had twice as many warriors.

The army of 90 men gathered in Hartford and set out bravely down river to destroy the Pequot power. Captain John Mason, a trained soldier, was the leader. The route that the army took is shown on page 33. At Saybrook it was joined by 19 Massachusetts soldiers under Captain Underhill. Mason then sent home 20 of his own men to help guard the settlements in case a Pequot war party attacked the up-river towns during the absence of the army.



This typical English soldier of 1637 wears armor which was very useful against Indian arrows. In his right hand he holds his gun support. Their guns were so heavy and long that they needed this support for accurate shooting.

Colrus

Late in May, the 90-man army set off from Saybrook by sea for the Pequot country, accompanied by about 60 Mohegan warriors, followers of Uncas. Uncas had been born in the Pequot tribe, but when he wasn't chosen as its chief, he left the tribe with a number of followers and built his own village further up the Thames River. These Indians called themselves Mohegans. They were friendly to the whites. Mason realized that the Pequot would expect him to attack from the sea, but he fooled them. He sailed his ship right past the Pequot warriors who were waiting to fight the English landing. When the Pequots saw the English sail by without stopping, they thought the whites were afraid to attack and they returned to their fort to celebrate. The English planned to land further east and to return through the forests to attack the Indians before they knew what was happening. The plan was a complete success. Mason's army marched two days through the forest and camped the second night only a short distance from the Pequot fort. Rising very early the next morning the English surprised the Indians before they were completely awake. After a bitter fight at the two entrances to the fort, the English set fire to it and completely destroyed the village. Only a few of the hundreds of Indians inside were able to escape.

The remaining Pequots completely lost heart at this sudden disaster. They divided up into several bands and fled. Some went west toward the Hudson river, others into nearby swamps to hide. One by one these groups were hunted down and killed or captured. By July, 1637, the war ended when the last large band of Pequots was surrounded and captured at the Great Swamp Fight, in what is now Fairfield. The prisoners were either sold into slavery or given to the Indian allies of the English. After a treaty was signed by the remaining Pequot sachems, a number of other Pequots came out of hiding and gave themselves up. Many joined Uncas and became Mohegans, others joined the Narragansett tribe.

This ended the first Indian war to threaten the new colony of Connecticut. The very thorough destruction of the Pequot tribe

Originally drawn to the side of the whites because of jealousy for Sassacus, the Pequot chief, Uncas, soon realized he had chosen the stronger side. From self-interest he remained a supporter of the whites until his death. The artist has captured in this likeness the crafty character of this important Connecticut Indian chief.

was a lesson that the Connecticut Indians never forgot. Life did not become completely peaceful in the Connecticut forests. Individual whites and Indians fought and a number of people were killed on both sides during the next few years. But no chief rose up among the Connecticut Indians to lead his people against the whites who were gradually crowding the Indians out of the region. It was different in Massachusetts. Similar land conditions existed there. A continual stream of white people coming from England were pushing the Indians aside. But here a leader did rise to lead the Indians in a war against the whites that for a time threatened to push the white man entirely out of New England. This was the chief who became known as King Philip.

King Philip's War

As long as Massasoit was chief of the Wampanoag tribe of Massachusetts, it remained friendly with the whites. Massasoit had befriended the Pilgrims during their first winter. He brought them food when they were starving. All his life he was a friend to the white man and hoped that his sons would continue this friendship. But times had changed between 1620 and 1662, when Massasoit died. The Wampanoags lost or sold most of their land to the whites. Philip, the son of Massasoit who succeeded him as chief, was bitter about this loss of land. He also suspected the English of killing his brother Alexander. He dreamed of the days before the whites had come, when the Wampanoags owned all the land and hunted wherever they wished. Now they had to ask permission of the whites to hunt over the land that once had been theirs.

In the years that passed after his father's death, Philip began to plan an Indian uprising that would sweep the English back into the sea and restore the land to the Indians. He visited and talked with the chiefs of all the tribes, asking them to join him. With most of the tribes he was successful, but the Connecticut Indians refused to join him. By accident, the war started in 1675 before Philip was quite ready. It was a frightful war because it was fought in and around people's homes, and many of the victims were women and children, both white and Indian.

At first the Indians were very successful. Twelve Massachusetts towns were destroyed and many others were damaged. Connecticut came quickly to the aid of her neighbors and sent

In this scene, King Philip, one of the greatest Indian leaders of New England, is urging the chiefs of a tribe to join him in a war to wipe out the English settlements.

large forces of men up the Connecticut valley to help the Massachusetts river towns. They also took a major share in the attack on and defeat of the Narragansett tribe. The war ended in 1676 after Philip's stronghold was captured and he was killed. Then the other tribes lost heart and gave up. Many of the Indians captured were sold into slavery in the West Indies. Before the fighting stopped both sides had paid a heavy price. Perhaps 1,000 whites were killed and more than twice as many Indians lost their lives. Connecticut land was spared but many of her men lost their lives.

This was the last serious threat to Connecticut settlers. After 1676 the Indians never again threatened the white settlements of New England with complete destruction. Indians remained in the back country, although many moved entirely out of New England, migrating to New York State or north into Canada. War parties came back many times and attacked the frontier settlements of western Massachusetts and New Hampshire. Fear of these attacks kept the Connecticut people from settling northwest Connecticut for many years. In Connecticut, the Indian population gradually declined in numbers. Many left the state, but a few settled down on reservations. There are still three small reservations in Connecticut. Two are for remnants of the Pequot tribe, one each in Ledyard and North Stonington; the third is in Kent, on the west side of the Housatonic River. A few Indians live on these reservations to this day.

The nature of an Indian war—the sudden attack on an isolated farm, the slaughter of the family, burning of the buildings, and the disappearance of the war party shows in this scene. The families of the pioneers paid a heavy toll for our settlement of a continent.

SETTLEMENT

CHAPTER 3

SETTLEMENT

The first ship to sail up the Connecticut River may have looked like this. A party is just coming ashore to explore.

The first white men to see Connecticut were probably the Dutch. In 1614, one of their ships sailed up the Connecticut River to where Hartford is today. The Dutch made no attempt to settle in the Connecticut region until much later, although they did start a settlement at New Netherlands, which today we call New York. The first English settlements in New England were at Plymouth (1620) and Salem (1628). Both were in Massachusetts. In the years that followed, many other English people came to these towns. By 1632 the newcomers were looking for more land on which to settle. Dutch traders told their friends in Plymouth about the big river with its broad, fertile valley (later called the Connecticut). One of the more adventurous of the Plymouth settlers, Edward Winslow, made an exploring trip with Indian guides westward through the unknown forest and saw this valley. He picked out a good location for a trading post and talked to the Indians about it. They encouraged him to come.

On the banks of the Farmington River in Windsor rose the first English settlement. This trading post was built by a party from Plymouth in 1633.

When Winslow got back to Plymouth he sent a small party to build a trading post at the meeting point of the Connecticut and Farmington Rivers. They came just in time. As they sailed up the river in the spring of 1633, they found a Dutch party building a trading post in Hartford. Winslow's post was better located than the Dutch to trade with Indians coming down the river. The Indians would reach the English post first. Another party of visitors was in the Connecticut area that summer. This was a small hunting and exploring group of four men, led by John Oldham. They came overland from Watertown, Massachusetts, to look for land. Oldham's party returned to Massachusetts for the winter, planning to return with a number of settlers the next spring. Only the two little trading posts, the English at Windsor, and the Dutch at Hartford, were occupied during the winter of 1633. The next year they were joined by some people from Watertown, Oldham's group, who settled at Wethersfield.

The first big migration of settlers came in 1635. Stories were spreading in Massachusetts Bay about the good land in the Connecticut valley. In several Massachusetts towns little groups of people gathered their things together to move to this new country. A party from Dorchester, led by Roger Ludlow, was the first. They sailed around Cape Cod in small sailing vessels and settled just north of the Farmington River, on the land that Winslow's traders had bought from the Indians. A second group came directly from England, settling south of the Farmington River but near the Dorchester people. The third large party came overland from Newtown very late in the season and settled in Hartford, just north of the Dutch fort.

Winter came early in 1635 and caught many of the new settlers before they were prepared. Their houses were not finished and the provisions they were expecting from Massachusetts had not arrived. Twelve people from the Newtown group started back through the forest. They became lost in the snowy woods and one drowned crossing a river. Not one would have made the Massachusetts settlements had it not been for friendly Indians who guided them to safety. Others of the Newtowners and some of the Dorchester group struggled through the snow, south along the frozen Connecticut River, hoping to find the provision ship. They found it caught in the ice at the mouth of the river, near the fort being built at Saybrook. Boarding the ship, they sailed back to Massachusetts, to stay for the winter with friends. A few families remained in each of the little villages, suffering from cold and the lack of food, but determined to hang on until spring. Thus in the winter of 1635, there were settlements at several locations: two villages in Windsor, one in Hartford, one at Wethersfield, in addition to the fort at Saybrook and the trading posts.

The *Great Migration* came in 1636. The Dorchester people who had gone back to Massachusetts for the winter returned with a number of new settlers and their minister. The tiny community at Wethersfield was increased by some newcomers.

The Great Migration of 1636. Only a few were able to ride. Mrs. Hooker, according to the story, was carried in a horse litter; most walked the entire way.

The Newtown group also returned. Some travelled by sea, but part of them, led by their minister, Thomas Hooker, came overland along Indian trails with a large herd of cattle. In those days there were no roads between Massachusetts Bay and the Connecticut River. Only Indian trails existed, wide enough for people to walk single file. It must have been an exciting trip for those who went, as were all of these migrations. One hundred and sixty cows, calves, steers and horses made quite a herd to drive through trackless woods. The people lived like nomads, sleeping out each night under the stars, drinking cow's milk for food. They had no trouble from Indians, but every river had to be swum, swamps had to be avoided, and wolves followed them all the way. They travelled on foot, and slowly, so that the cattle could feed along the way. It meant that they covered only 8-10 miles a day and took two weeks for the trip, May 31st to June 15th. The memory of this exciting journey must have remained long in the minds of those who were with the party. Their thoughts would have included a mixture of pleasant things, sunny, warm, breezy days, or campfires at night; and of hardship; biting flies, numerous in the woods in early June, days of rainy weather, and trouble in crossing streams. When they reached the Connecticut River they crossed it in canoes at Windsor, swimming their cattle, and they settled in the southern part of Hartford.

Why they settled on the Connecticut River

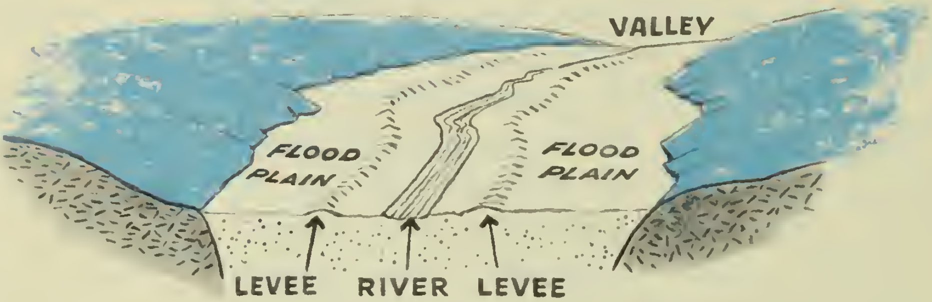
Why these people left homes they had just built in Massachusetts to move to Connecticut is a little hard to understand unless you know more about their characters. The settlers who came from England to the colonies were a very determined people. They left England because the church there would not let them worship as they desired under ministers they chose themselves. This system did not agree with that of the English church leaders. Usually they traveled in small groups of 30-40 families and set up churches of their own. On arriving in Massachusetts Bay Colony these little groups found themselves in a settlement that was already established. Again they had to obey certain rules which they had no share in making. If they could find a new area and settle it for themselves, then they could make the rules they desired. Their ministers were very able leaders and sometimes quarreled with the ministers that were already settled in the Massachusetts Bay Colony. Thus, the opportunity to move to Connecticut was not a hardship, it was really what they had been looking for all along. As you read early Connecticut history you will find that each little town was set up by a group of families, often a church group, which we call a congregation, each had a minister they were willing to follow. Several of these congregations were led by their ministers to Connecticut.

The choice of the middle Connecticut River Valley as the place for the first settlements in Connecticut was not accidental.

The men chose their location carefully. They were farmers. They had to be because it was the only way they could get enough food for their families. This meant that they had to find good farm land.

You already know something about the way a river picks up, carries, and then drops sand, gravel, and clay. (We sometimes use the words "sedimentary materials" as a substitute for the words sand, gravel, and clay.) When a river is flowing rapidly it can carry a lot of sedimentary material, but, when it slows down, this material is dropped on the ground. This dropping of material on the land near the river happens along all river valleys.

The diagram below shows a river in cross-section, just as if you cut the river valley in two. It looks as if the river is coming toward you. The little ridges on each side of the river are called *levees* and the flat land behind them, away from the river, is called a *flood plain.* Normally the river flows in its channel. Every spring, when the snows melt, there is a flood that fills the channel to overflowing. Then the water laps over the levee and spreads out on the flood plain. While the river is flowing in its channel, it is moving rapidly and is carrying a lot of sedimentary material. After it floods over the levee into the flood plain, it



This diagram might almost be a cross section of the Connecticut River near Hartford. The flood plain offered good farmland to the early settlers.

slows down and drops this sedimentary material. In this way the flood plain gets a fresh supply of fine particles of sand and mud every year. Notice how the diagram shows that the entire valley, channel and flood plain, is made up of sedimentary material. The uplands on both sides are rock.

Now you can see why a river valley, particularly a broad one, provides good farm land. It is level, made up of fine material, and doesn't have large rocks to interfere with plowing. The one disadvantage that it has is the annual flood which covers the land with water. This flooded period may last for two or three weeks in March or April in Connecticut. The flood is a nuisance in a way. The farmer has to let the land dry out before he can plant. Here, in Connecticut, the farmer doesn't usually start to plant until late April or early May, so this is not too much of a problem.

We can see that the first settlers of Connecticut were very wise to choose the place they did. They built their towns and houses far enough back from the river so they didn't get flooded, but close enough to be able to use the good farm land of the flood plain for their planting. There were two other reasons why they chose these areas for their first towns.

Most of Connecticut was covered with forest when the whites arrived. Before they could use the land for farming they had to cut down trees. But a flood plain was not covered with trees. Few trees like to grow with their feet in water. The usual vegetation on the flood plain was grass. This meant that the farmer could plow the land without first clearing it of trees. It also meant that he had natural fodder (food for his cattle) without having to plant grass. After the flood plain was occupied by the earliest settlers, the later ones had to settle in the forest and cut down trees before they could plant their gardens and fields.

The third reason why they settled in the Connecticut River Valley and along the coastal plain was that waterways provided transportation. Many of you have hiked in the forest. The next time you take a hike look around you at the rocks and trees that border the path on both sides. Imagine how much work it would be to build a road wide enough for a wagon to travel along your path. Note also how you are constantly climbing up and going down. A road has to be much more level than a path. There were no roads here when the whites arrived. They had to build all of them and they had no power tools. There were many Indian paths. The parties that came overland in 1635 followed Indian paths, but it took them two weeks and they came on foot or on horseback. They had no wagons.

The easiest way to travel in Connecticut was by boat. The English people had many different styles and sizes of boats. The ones they sailed from England were medium sized. (Today there is an exact copy of the first ship to come to Massachusetts, the Mayflower. It was built in England in 1957 and sailed to the United States to Plymouth, where it can be seen today.) We wouldn't call such boats large. The Mayflower was only 106 feet long, including her bowsprit, 25 feet wide, and 12½ feet deep. Yet she carried 102 passengers and a crew of about 25 men. Other boats used along the shore were smaller. Since travel by water was the usual way to travel, all the earliest settlements were located on the sea or on navigable rivers (navigable means that boats could go up and down them). The next map shows the location of all the towns settled by 1664. They are all on the water except Farmington. The Connecticut River was navigable to Windsor, the Housatonic to Derby, and the Thames to Norwich.

Besides being easier to get to, the waterside towns had advantages for trading. The people who came to Connecticut knew that some day they would be producing enough corn and meat on their farms so that they could sell some. If their farms were located near a harbor it would be easy to ship out their farm produce and to bring in goods from other areas. Some of the early settlers, like those who settled New Haven and New London, chose their town sites because they had good harbors.

They planned to become traders. Other towns were located on other harbors in the state as the years went by. The interior parts of Connecticut were not settled for some time.

The Mayflower and many of the other ships that brought settlers to Connecticut must have looked like this.

After the flood plain was settled, people who came later had to clear their land. That was a slow process. A strong man could clear up to 3 acres of land by himself in a year. If he had the help of strong sons he could clear more. After the trees were cut down, usually done in the fall or in the winter, they were permitted to dry out. Then in the early spring they were set afire. These were tremendous bonfires. In a town that was being settled there were sometimes ten to fifteen fires burning all at once. Travellers in those days who went through the state in the spring of the year wrote about the columns of smoke rising on all sides above the forest. Each one meant a family clearing land and building a home.

The settler had many jobs to do. Besides clearing his land and burning off the trees and brush, he had to build a house for his family and a barn for his livestock. Our state has cold winters, as you know, and animals need shelter from November until about May. Before he could plant his fields, he had to build fences so that his livestock couldn't get at the crops. These

Most of the land close to the cabin has been cleared. Now the farmer is expanding his fields.

fences might be stone or wood. One common type used at first was a stump fence. The stumps of the trees he cut down prevented him from plowing his land. As soon as he had time he used his oxen to pull them out of the ground. Then the stumps were dragged over to the edge of the field where they were arranged as a fence.

The stump fence was not very permanent, but it solved two problems at once, fencing in the cattle, and getting the stumps out of the field.

In the first year or two there were too many roots in the ground for the farmer to use a plow. Instead, he went around the field and dug little holes in the ground into which he dropped the seeds of corn. In this work even very young children could help. Corn was almost always the first crop. It grew well and provided food for both men and animals. In addition, the farmer usually planted an orchard of apple trees and his wife planted a vegetable garden. One of his main problems was food for his animals to keep them through the winter. This meant hay. If he was fortunate he had some flood plain land that was naturally covered with grass. There were also swamps that sometimes had a grass cover. Along the coast were salt marshes. These native grasses were cut and hauled to the barn for the animals.

Almost every family kept livestock, which included two or three cows for milk, butter, and cream, oxen for heavy hauling, and often a horse for riding. Sheep provided wool which the wife and daughters spun and wove into cloth for their clothing. Chickens were kept for eggs and meat and most farmers had pigs. Having so many animals meant that everyone had to work to take care of them, but taking care of animals can be fun as well as work. For the family that lived away from the village, young animals were often the only playmates the children had.

Pioneer life was a lonely one. Neighbors were some distance away and most people were too busy to visit one another very often.

Both the house and barn were made at first of wood. It was a sort of by-product of clearing the land. The small straight logs were set aside and split into planks that were used to build the house. The job of raising a house or barn was done in a neighborhood get-together. It was a combination work-party and picnic. The men and boys put up the building while the women prepared the food. After the work was done they often had a dance. It was fun especially for the children. Within a few years, as soon as there was a saw mill in the town, the farmers replaced the plank house with a wooden frame house. As a man's family grew, it outgrew his first home. He had to build an addition or put up a new house, large enough for his entire family. In the seaport towns the richer families built large frame houses at the very beginning.

GOVERNMENT

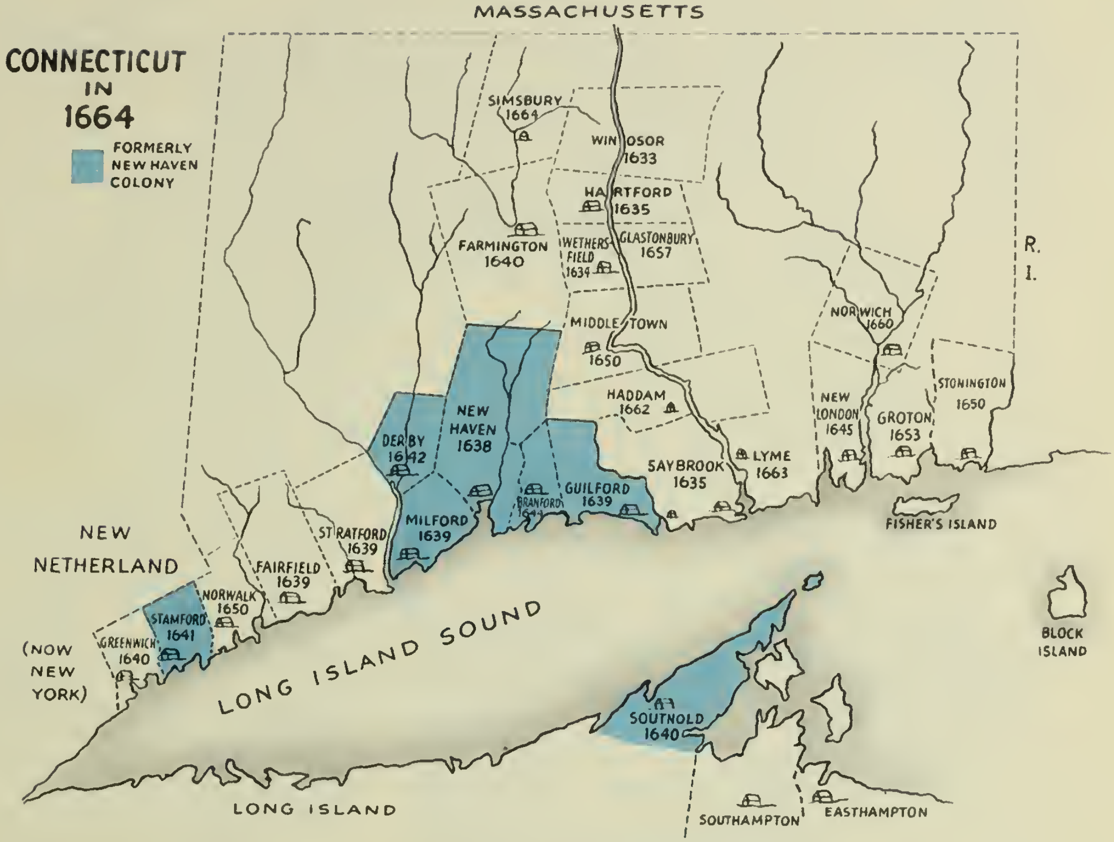
The people who came to Connecticut came partly because they wanted to be able to have their own churches and to choose their own ministers. They also had new ideas about their government. At that period most people were ruled by kings and nobles, but these settlers were determined to rule themselves. The new settlements on the Connecticut were too far from Massachusetts to be able to depend on that government, and they could not be sure that it would do what they wanted. Remember how the Pequot War started. The people acted on their own in that emergency and then went ahead to set up a government of their own. The written part of the new government was called the "Fundamental Orders." You may want to read them for yourself. It was the true beginning of the government of Connecticut. We can't include everything here about that paper, but three of the items are very important. The first was the separation of the church and the government. Each was to decide its own problems. The second was that there would be no taxes except those that the people of Connecticut themselves decided upon. These taxes would have to be voted by representatives of the people in the General Assembly. The third point was that the male inhabitants, called freemen, would vote to elect the representatives and the governor and other public officers. This was the first written constitution in the colonies and created a type of government that would later develop into our present national democracy. It was written and adopted in 1639.

During the next few years many more people came overland or by water to Connecticut. New towns were laid out and settled in exactly the same way as the first ones. In 1638 New Haven was settled by a party of people who came from England. For some time they had a separate government from the Connecticut government at Hartford. Four new towns were settled in 1639, two of them by people moving out of the New Haven colony. By 1643, ten years after the first English arrived in the region, there were about 5500 people in Connecticut, half of them living under the Fundamental Orders and half in the New Haven governed towns.

The year 1664 marks the end of one period of Connecticut's history. The Dutch colony at New Netherland was captured by the English and became the colony of New York. The eastern border of this new English colony prevented Connecticut from expanding its territory westward. Thus, our western boundary has remained almost unchanged since that date. The second important event of that year was the union of the New Haven and Connecticut colonies. Now all the people of the region would be under the same government.

By 1664 Connecticut had been in existence for thirty-one years. There were still very few people here; we can estimate the total number at about 8,000. They were widely scattered in twenty settlements, most of which were quite small. At four other spots in the state new settlements were just being started. All are shown on the map on page 69. Less than half of these little towns had been in existence as long as twenty years. All of them had cleared only a small fraction of their areas. If anyone could have flown over the state as a bird at that time, the tiny clearings would have been almost lost in a sea of woodland. Every settlement was surrounded by small, stump-filled fields and these were surrounded by the forest. Only along the middle Connecticut River was there a large area of cleared farm land.

About half of the total population were children under the age of 16. Most of the people were English, but there were a few French, Dutch, Scots, and Irish. There were practically



The map shows the towns that were settled in 1664 in both Connecticut and New Haven colonies. Note the way they are limited to areas that have water transportation, except for Farmington.

no Negroes at this early date, although some would be brought in later. The Indian population may have numbered about half as many as the white population. An Indian village could be found near many of the English settlements. Most of these Indian villages would prove to be only temporary. As the white population increased the Indian population would decrease. One by one the Indian tribes would die out, their villages would be abandoned and the land taken over by the whites. Many Indians migrated west and some of their descendants can be found today on western reservations. Meanwhile the white population would expand until it reached the 2,500,000 mark by 1960.

The fort-like church was a common sight in every new settlement. Here the settlers are going to church. Evidently there was still danger of an Indian attack; the men are carrying their muskets.

GROWTH OF CONNECTICUT 1664 — 1764

CHAPTER 4

GROWTH OF CONNECTICUT 1664 – 1764

One hundred years, a century, is a long time. For many people reading this book it is about the period between the date when your father's grandfather was born and today. It covers part of the lives of four generations of people. This is the period we will describe here.

Many changes take place in 100 years. If one of the first citizens of Connecticut had lived to see the year 1764, he would not have been able to recognize the state. It had grown from a population of 8,000 to 150,000. In the first three towns settled, for instance, there were over 8,000 people in 1764. The entire state had been divided up into towns and land was being cleared in all of them. Settlement had spread out of the central valley and back from the coast into both Eastern and Western Uplands. Wars were fought. Besides King Philip's War (described in Chapter II) Connecticut men had fought in four other wars. Fortunately for Connecticut people, all battles had been fought outside of the state. Perhaps one quarter of the men of the state had been soldiers or sailors in a campaign. Many had fought in several wars. Lumbering, mining, shipping, whaling, fishing, and trading had become exciting new jobs and opportunities for Connecticut men. They were finding and using many other resources in the state besides its farmland.

All of these changes provided exciting adventures for the people who lived through them. In many ways the most important adventure that the men, women and children of the state shared was building new homes in the wilderness. It was creating something that would be theirs, a home in which the children would grow up. It was creating memories that would fill the minds of the fathers, mothers, and children just as you have family memories and jokes about your own family history. And it was creating our state.

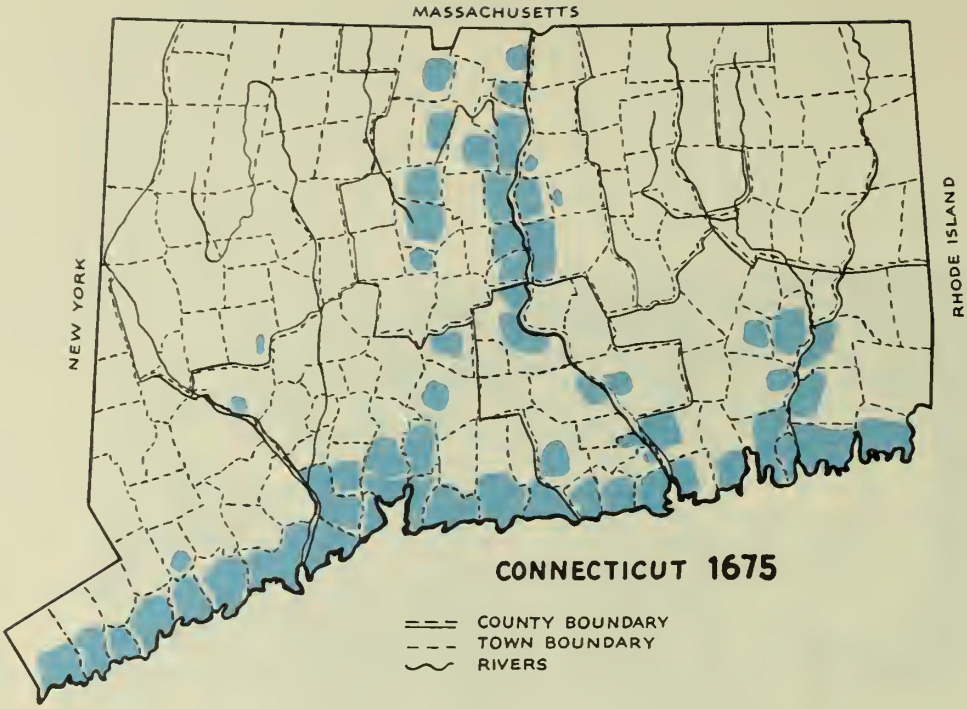
DIVIDING UP THE STATE

Settling all of Connecticut was very slow work; it took many years. But each new generation of people saw the forest pushed back a little bit more. They saw more and more fields uncovered and watched their crops grow and their livestock increase in numbers. As the years passed each family saw its children grow up and get married. Then the married children moved out to new lands to repeat the work of creating homes of their own, cutting down the forest, clearing the land, and settling the state.

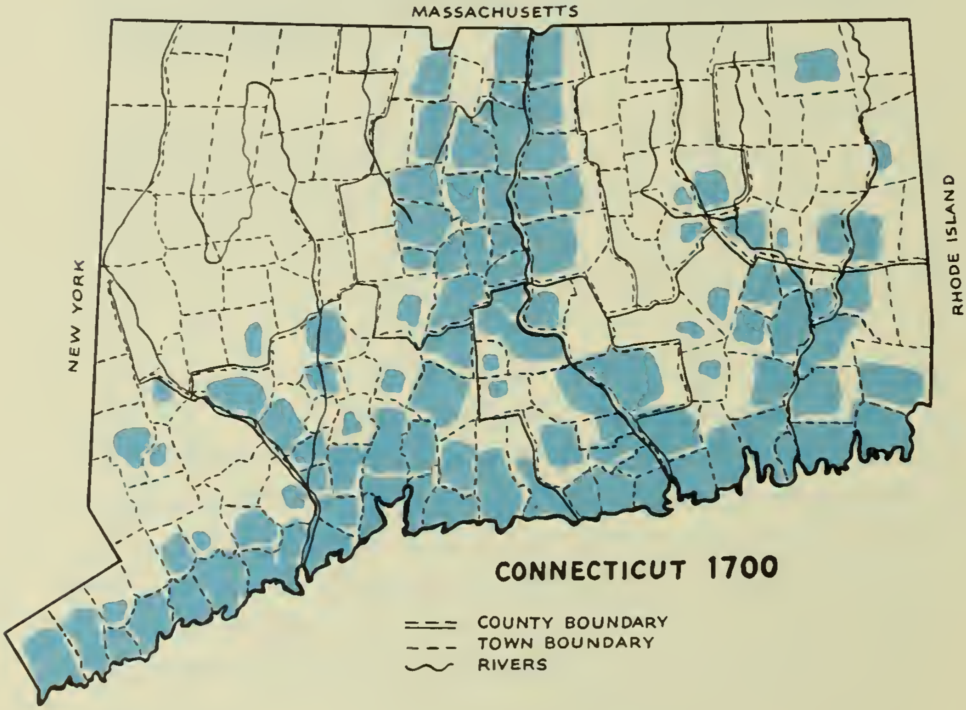
Although no town in these early days was so filled up with people that the new generation of families was forced to leave, many of them did move out to new towns. They had the same adventurous spirit that all young people have. They had the same desire to start things for themselves that their fathers and mothers had. Long before the oldest towns were filled up, groups of people from Hartford and Windsor were pushing westward into the Farmington River Valley or across the Connecticut, up the little rivers that flowed into it from the eastern upland. Before the forest was cleared away in the coast settlements, young families from those towns were pushing up the Housatonic, the Naugatuck, and the Thames River valleys. Often the name of the newly settled town tells where its first settlers came from. New Milford was settled by people from Milford, and New Fairfield was settled by Fairfield families.

The wagon is loaded, the mother and baby are already in their seats, there is nothing left but to say good-bye. This young family is starting out to settle Connecticut's frontier.

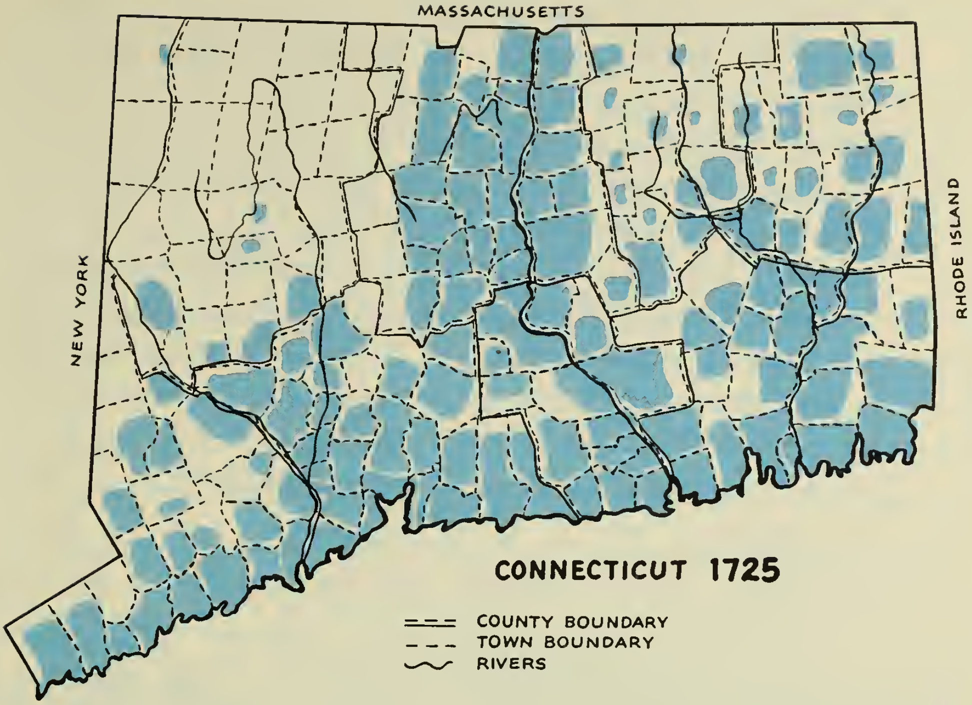
There are too many towns in the state to list them all here and to give the dates when each was settled, so the next series of maps was drawn to show how the expansion of settlement took place. The small dark patches in a town show that settlement had already begun. On the later maps the increased size of the dark patches shows the increasing area of land that was cleared as the town's population increased. The maps are dated and show how the state filled up.



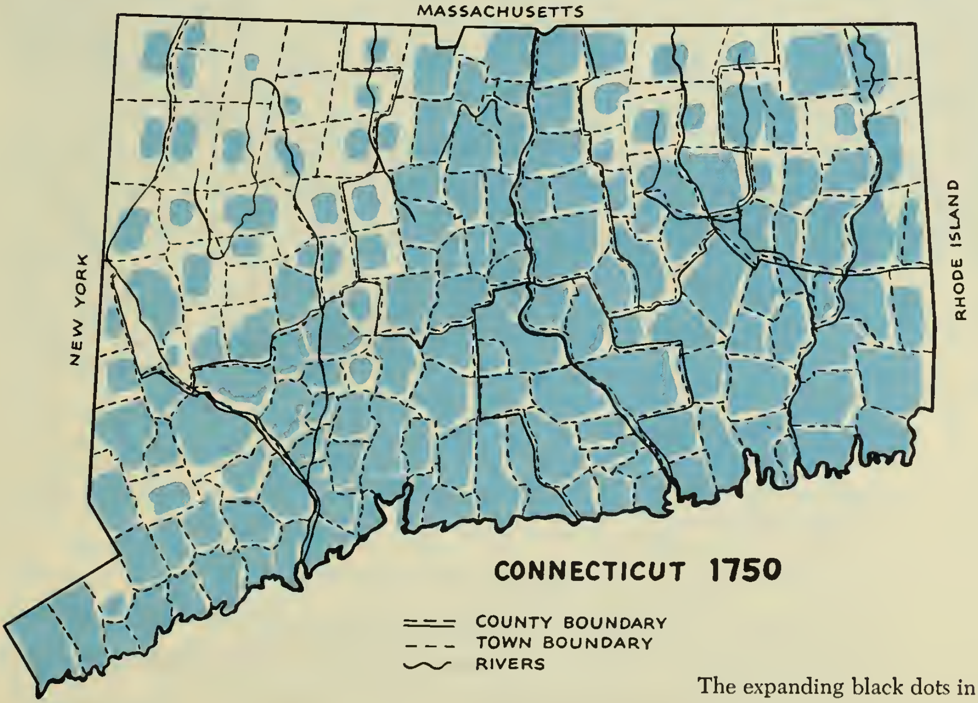
CONNECTICUT 1675



CONNECTICUT 1700



CONNECTICUT 1725



CONNECTICUT 1750

The expanding black dots in a town indicate the growing population. The most valuable land was settled first.

The better lands were taken first. The seacoast was divided into towns by 1664, as was the middle Connecticut Valley. Then people began to leave the broader river valleys and level coastal region and to move into the uplands. The very slow settlement of Litchfield County, in the northwest part of the state, was partly due to danger from the Indians. Some of the upland areas proved to be rather level and had fairly good soils. The soils did have one disadvantage, they were often stony. Remember, one of the advantages of a flood plain was the lack of large stones. Most farmers in the uplands had to clear stones from their fields as well as to cut down trees. You can see their work today in the hundreds of miles of stone walls that surround the fields of the state. When the farmer was picking up the stones from his fields, the easiest way to get rid of them was to make them into a stone wall.

Our miles of stone walls stand for thousands of hours of back-breaking work. Like the stump fences they served the double purpose of providing a place for unwanted material and a barrier to keep the cows out of the cornfields.

Most of the people living in Connecticut in 1764 had been born in the state. The migration from England had slowed after 1700. Families were still coming from other countries in Europe, France, Germany, and Scotland, but few came to Connecticut. There was better and cheaper land in the colonies of Pennsylvania and New York. The reason the population of Connecticut grew so rapidly was that most families had from five to ten children. As these children grew up they filled up the old towns and settled the new ones.

NEW RESOURCES

Although most men continued to be farmers, some began to use other resources as well. These other resources included the lumber of the forests, the metals of the rocks, and the fish and animals of the sea. Some of them were used in a small way from the first days of the colony. By the end of the century, men were beginning to produce larger quantities for sale. All three of these resources were unevenly distributed around the state, so some towns concentrated on one and other towns on another. The seacoast towns were naturally interested in fishing. A few towns had mines, and most had forests.

When there is a great deal of something around, it has little value. We sometimes use a phrase "dirt cheap" which means the same thing. Something as common as dirt is not worth very much. In the early days of our state this was true of lumber. Every farmer had more wood than he could use. In fact, the pioneer farmer, clearing his land for crops, burned up the trees he cut down just to get rid of them. He did use some of the smaller tree trunks to build his cabin. Later on, when he wanted to build a frame house he had to have boards and beams. He could saw the tree trunks up by hand, but it was easier to take his logs to the little saw mills that were being built in every town. The mills used water power to saw the logs. Any man who wanted boards could bring logs to the mill to have them cut up. The miller kept a few boards out of every log as his pay.

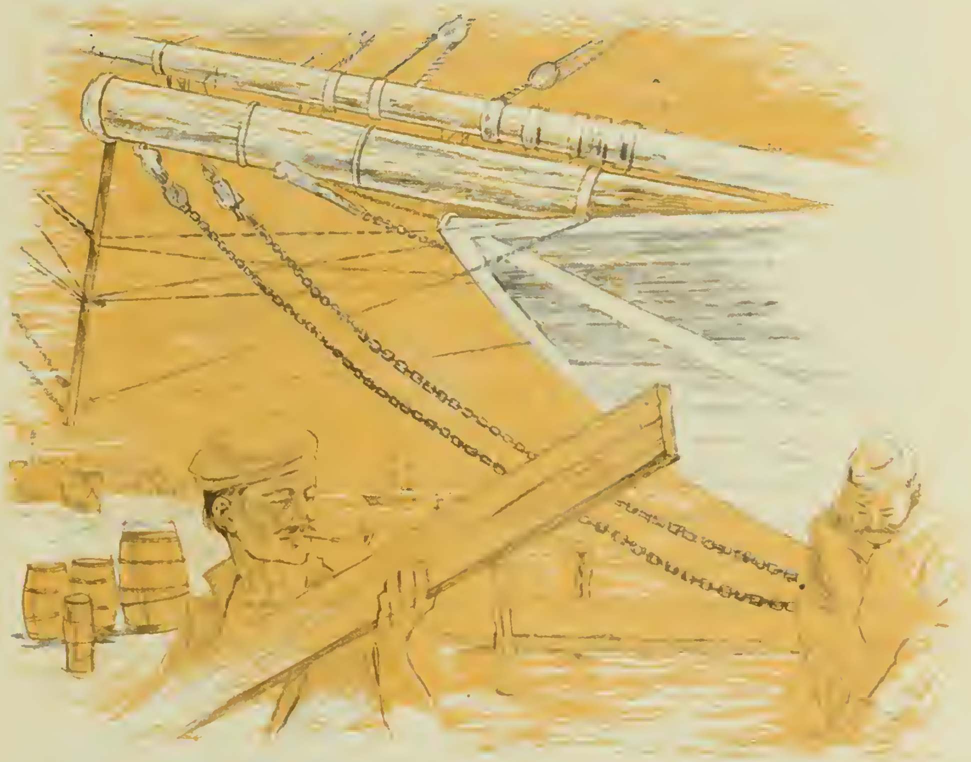
Lumber

People who lived in the villages often did not own woodland and they would buy their lumber from the miller. As the towns grew in size and more people used more lumber the trees close to the towns were used up and men had to go farther away for their lumber. In the hilly upland region there was a large amount of uncut lumber. The numerous rivers made it easy to float these logs down stream to the larger settlements, where they were cut up in the saw mills. By 1700 almost every river in the state had an annual log drive in the spring.

Here a settler is cutting down a tree that may be turned into furniture or timbers for a ship.

Most of the trees in the forest have broad leaves. They are deciduous trees which means they drop their leaves in the winter. The most common are birch, beech, maple, and oak, but there are many others. Hardwood trees like these are very useful in making things that require strong wood. Furniture, tool handles, wagons, and ships all require hardwood. An even more valuable lumber tree is the white pine. This has a soft wood that is easier to cut and shape. Many of the boards we use are pine. The white pine has another advantage in that it grows very tall and very straight in a single trunk. (Most deciduous trees have large branches.) The white pine makes the best masts for ships.

Because most transportation was by water in these early days, the men of Connecticut started to build ships soon after they settled here. This meant a big demand for masts. They were needed by local shipbuilders and they could also be sent to



Two ship's carpenters are busy at work building a ship that will carry Connecticut's farm produce to England or to the West Indies.

England where the white pine does not grow. Masting, as the work of cutting down and bringing these big tree trunks to the coast was called, was a very profitable business. It was also very risky. Cutting down a 150 foot tree without breaking it was difficult. After the tree was on the ground it had to be dragged to the river and then brought down the river in the spring flood. Many masts were caught in the falls in the rivers and broken to bits. But, if one was successful, the mast was worth a lot of money. Many men tried it and a few succeeded. Lumbering made a good winter job for farmers. The work began after the snow fell and ended with the spring log drive. Probably most of the lumbering in Connecticut was done by part time workers, men who were farmers in the spring, summer and fall, and lumbermen only in the winter.

Mineral Resources

Besides lumber and farmland there were other resources that the Connecticut settlers looked for. These were metals. Ever since the Spanish found gold and silver in their colonies of Mexico and Peru, every settler dreamed of finding a gold mine on his land. Some of them spent much of their spare time poking around in the woods looking at the rocks and searching for metals. They hoped to find gold or silver, but they knew that almost any metal would be valuable.

Metals are usually found in tiny quantities scattered through rocks. This combination of metals and rocks is called an *ore*. After it is discovered and dug out of the ground, the metal has to be separated from the ore before it can be used. There are a number of ways of doing this. Later on this book will describe the way iron is separated from rock. There has to be enough metal in the ore to be worth the trouble of getting it out. It takes time and money to separate the two. If there is too little metal, it simply is not worth the effort. This is the problem in Connecticut. There are small amounts of a great many metals. But in only a few areas is there enough of any one metal to be worth mining. Some of these places were discovered and mines were opened up.

Finding metals is like looking for buried treasure. Most of the rock is buried deep in the ground and only the top shows. Sometimes even this is hidden beneath a layer of soil and vegetation. The metal hunter, we call him a *prospector,* had to know what kinds of rocks would have metals. He knew that copper was sometimes found between a layer of trap rock and a layer of sandstone. Where copper is exposed to air a green stain is produced on the rock. Thus, the prospector followed along the trap rock ridges in the central valley looking for signs of copper. When he found these green stains he stopped, dug out some of the rock and tested it to see how much copper there was. If the ore was rich enough in copper he opened up a mine. Where the rock appeared on the surface, only a big pit was needed; but, if he had to follow the copper ore deep into the earth, he had to dig tunnels. After all the ore was dug out the tunnel was abandoned.

Hidden in the hills of Connecticut were several ores of valuable metals. Here two miners have dug a tunnel to get these ores out. The track and little cart make mining a little easier.

Some of these old tunnels exist today and can be explored. Copper mines were worked in Granby, Cheshire, and Bristol. Today, the only mine safe to visit is the one in Granby. This was used for many years as a prison after it was abandoned as a copper mine. It lies off Route 20 in East Granby and is called the Old Newgate Prison. It is open to visitors for a small fee. Other small mines for other metals can be found in Monroe, in Cobalt and in Trumbull. None of the mines produced very much in the way of metals. Even the copper mines were small. The only metal that was important in Connecticut was iron. Since the iron mines were not discovered until 1730, and were not used very much until later in Connecticut's history, they will be described in a later chapter.

FISHING AND WHALING

From the beginning the settlers used the resources of the sea. As the Indians had done before them, they caught fish and collected shellfish in the rivers and along the coast. Most people caught fish for their own use, but a few fishermen caught more than they could use and sold them. People in other parts of the world were eager to buy fish, but you couldn't ship fresh fish to Europe or to the West Indies. They would spoil. The Connecticut fishermen would clean their fish and then pack them between layers of salt in barrels so they would keep on the long voyage to Europe. Salt fish was an important export of the state and most of our coastal settlements were fishing towns.

There were other resources in the sea besides fish. One of them was the biggest animal in the world, the whale. The first English often used to see whales in Long Island Sound. They could be caught by men rowing out from the shore in small boats. Whales were hunted for their oil. Some of the oil was used in Connecticut but most of it was shipped to England. It was used for lighting in homes. Whale oil was burned in lamps that were much like the kerosene lamps your father often keeps today in case the electricity goes off.

Connecticut whalers hunted sperm whales like this one from the Arctic to the Antarctic. This is what Moby Dick looked like.

Small boat hunting of the whales lasted only a few years. The whales were hunted so much that they left the Sound and had to be followed out into the ocean. When small boats were used the whales were towed back to shore before they were cut up and oil was boiled out of their blubber. In deep sea whaling the ship itself carried all the equipment to get out the oil and big casks in which to store it. In later years Stonington, New London, and Bridgeport became important whaling ports.

whale oil lamp

Some of the first settlers in Connecticut were not interested in becoming farmers. They had been city people in England and knew nothing about farming. These were the people who settled along the coast and became traders. At first they traded with the Indians, giving iron tools, cloth, and beads for furs and skins. The most valuable product of Connecticut in the early days was these furs which could be easily sold to people in England. There were many fur-bearing animals in the state. The most valuable one was beaver. As the state became settled the number of these forest animals grew smaller, and it became harder to find them. The Indian and white trappers moved north and west into unsettled regions where the animals were still numerous. Some of the traders moved too, but many turned to trading in other things.

In the background two beavers are building a dam. The pond that will develop behind the dam will be the site of their house.

As a man's farm grew in size he began to produce more farm goods than he needed for his own family. Now he had corn, animals, and wool that he could trade for goods that he could not produce for himself. The lumbermen in the forests were producing masts and wood in other forms. Along the coast the fishermen and whalers had fish and whale oil to sell. In the larger towns traders set up shops where they exchanged manufactured goods for these Connecticut products. Connecticut products were shipped off to England and the West Indies and exchanged there for such things as sugar, salt, cloth, iron tools and many other items. These were brought back to Connecticut to be sold to the farmers, lumbermen, and fishermen.

The general store was famous for having everything that a family might want.

Every town had a small, general store that dealt with the local residents. In the larger coastal towns merchants would collect the local products from the small town stores and ship them to Europe in their own ships. Many of these ships were built in Connecticut, since most of the seacoast towns had shipyards. Ships needed sailors and officers, so many Connecticut people turned to the sea for work. The towns that had the best harbors grew in size and became small cities. The people who lived in them weren't farmers. Some were fishermen or sailors, others were merchants and store clerks. Skilled workers found jobs making ships, furniture, houses and various other things. Women made cloth and then turned the cloth into dresses and coats. These towns became small handicraft centers.

Shipping interests gradually expanded as shipyards increased in number. In 1730 there were 42 locally built small ships owned in 17 towns in Connecticut. Most of the ships sailed from coastal towns, but few came from the Connecticut River ports of Middletown and Hartford. Even Haddam and Wethersfield had one ship apiece at this date. By 1760 the Connecticut trading fleet had expanded to 114 vessels. They traded with England, the West Indies, and even into the Mediterranean. In their outward cargoes were all the products of Connecticut that we have mentioned: fish, whale oil, lumber, corn, cattle, and other farm products. They brought in salt, sugar (from the West Indies), and manufactured goods.

Moored at the wharves in this little Connecticut port are some of Connecticut's far-traveling ships. This is New London as it might have looked in the early 18th century.

You can see that the Connecticut of 1764 was a very different place from the Connecticut of 1664. It had grown up. The 8,000 people, mostly farmers, of 20 tiny towns located on the shore or in the central valley, had expanded to a population of over 150,000 workers in many different types of work. They were spread out over the entire state. In 1664 they had been pioneers thinking only about their own problems of creating homes in the wilderness. By 1764 they had become part of a wider unit, the colonies, tied by trade routes to the rest of the world. Part of this changed way of thinking came from their having shared in five wars.

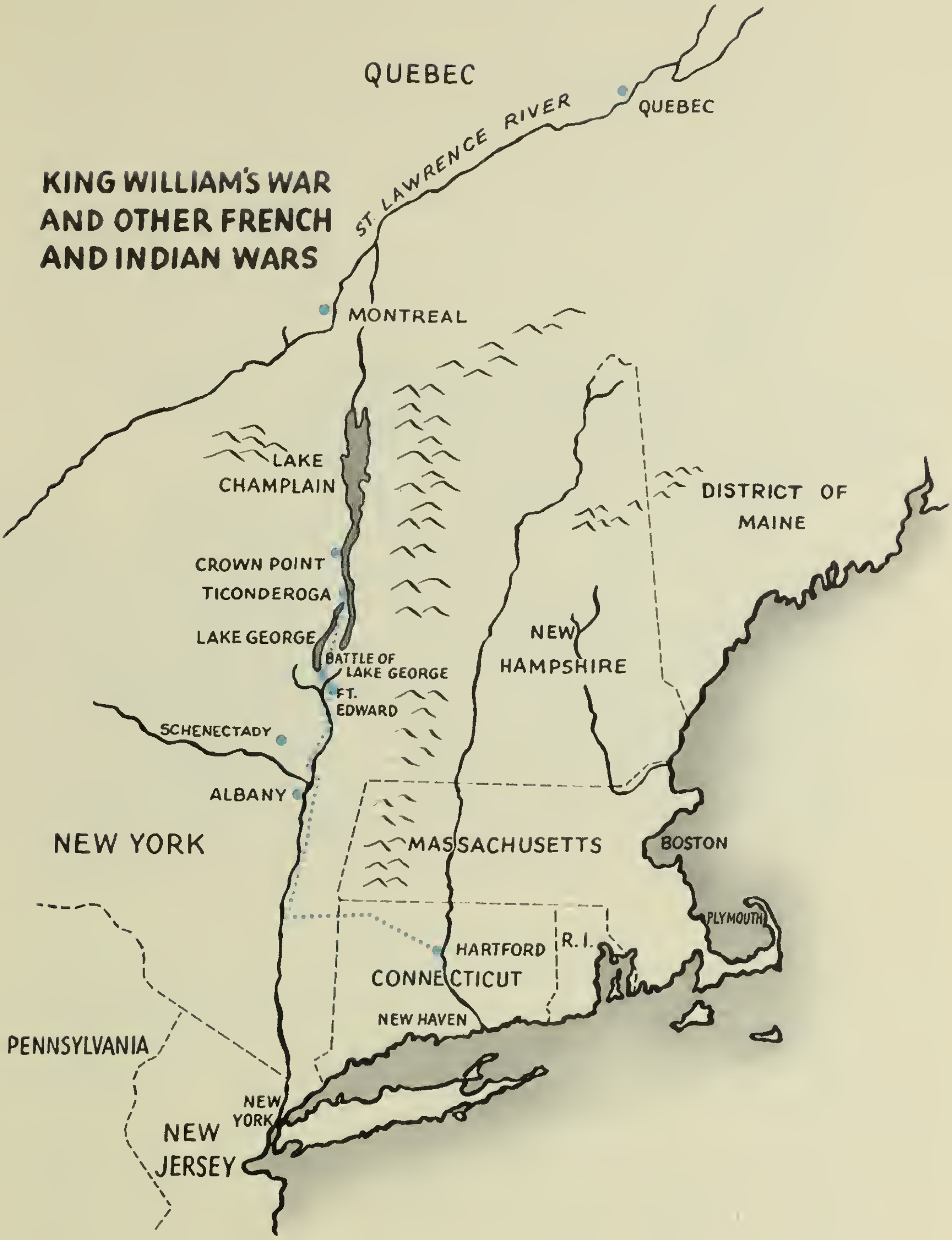
THE WARS

The story of King Philip's War has already been told in the chapter on Indians. It was a terrible war, and, even though it was fought entirely outside the state, many Connecticut men lost their lives and others were injured. To a number of Connecticut families the war was a great tragedy, as all wars are to the families of the men who are killed or wounded. We can best understand the four other wars that took place in this period by looking at them through the eyes of one family. This is not an actual family, but its adventures did happen to many Connecticut men and women. Other men named in this section were real people.

The family is that of Jonathan Hall who was one of the first settlers in Westersfield. His family suffered in the Pequot War; he himself served in Mason's army and was wounded by an arrow through his arm. It ached severely in wet weather so that every rainy day for the rest of his life he remembered that early morning attack on the Pequot fort. His oldest son, John Mason Hall, and two grandsons served in King Philip's War. John Mason Hall was one of the 40 Connecticut men killed, out of the 300 men who went, in the attack on the Narragansetts. Thus the Hall family took part in and suffered from both of the Indian wars that were fought in the early years of Connecticut's history.

James Hall, John Mason Hall's second son, had served in the war against King Philip without being hurt. On returning from the war, he began to clear land in the eastern part of the state. He was too restless to settle down permanently as most of his friends were doing. When King William's War broke out in 1690, Connecticut was asked by the New York governor to send help, and James volunteered to go. The Connecticut company, under Captain Thomas Bull, marched overland to Albany to help guard the upper Hudson Valley against an attack by French soldiers and Indian warriors from Canada. They arrived just in time to help fight off an attack on Schenectady. In the battle five Connecticut men were killed and five others were taken prisoner by the Indians. Among the prisoners was James Hall. He was fortunate enough to be adopted by an Indian family that had lost a son in the fight. Being adopted was better than being killed, but James had no desire to remain an Indian. He was guarded closely for several months. Since he was careful not to show that he wanted to escape, the guard became careless.

James Hall, taken captive at Schenectady, is being marched off by his Indian captors.



Lake Champlain was the main route between the French and English colonies. Most of the land battles in these wars were fought to control this route. Hundreds of Connecticut men marched the weary road to Albany and the wars.

One morning, in the following spring, his chance came and he stole away quietly before dawn. Traveling all day and the following night he got away from his pursuers. When he finally reached Lake Champlain he found an English and American army making ready to march north against Montreal. Since there was a Connecticut troop with the army James joined it. The march north never came about, but there was bitter fighting in the woods of northern New York, and James had his share of it. By the time the war ended in 1697 James had been promoted to Lieutenant. Returning to Connecticut he settled down in New Haven where he became a merchant and a leading citizen of the town.

QUEEN ANNE'S WAR – 1709-1714

When the next war broke out, James was appointed Captain of the New Haven company and second in command of the Connecticut force that was enlisted to march against Montreal. A second time James found himself marching to northern New York state. With him went his nephew, Thomas. The army gathered at the southern end of Lake Champlain to wait for British reinforcements. These British troops never came. Sickness attacked the army and so reduced its numbers that it was ordered back to Albany. Of the Connecticut force that had so bravely set out, almost one quarter died of disease and were buried in the wilderness. Among them was Captain James Hall. His nephew, Thomas, brought the sad news home to the family.

The next year the British and colonial governments joined forces in sending an army to attack Port Royal in Nova Scotia. Thomas took part in this expedition, also. He was a sailor. The family had moved to a farm in Haddam that was near the river, and he had often sailed up and down it as a small boy. When a Haddam man built a ship, Thomas jumped at the chance to go to sea. By the time the Port Royal expedition began he was second mate of the ship. One of the transports chosen to carry the Connecticut men to Port Royal was Thomas' ship. In the

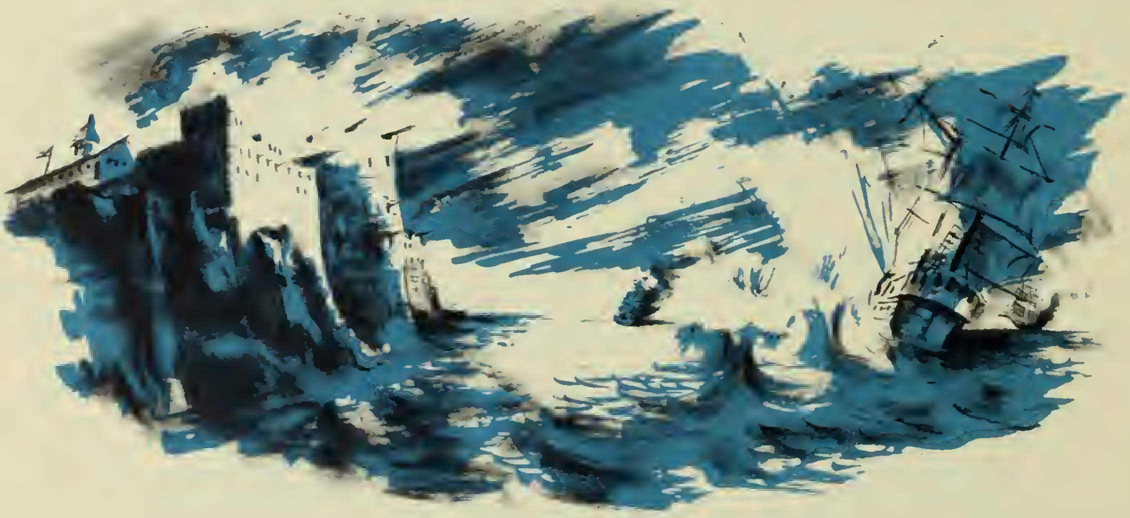
This is an artist's conception of the British attack on the French fortress at Port Royal.

attack he was wounded, but not seriously. The expedition was a great success, Port Royal was captured, and the Connecticut men returned home to be received as heroes. The attempt the following year to capture Montreal by a joint land and sea attack was a failure. Thomas also sailed on this expedition and returned unhurt.

By the time the war ended in 1714, Thomas was a veteran. He spent the rest of his life sailing and trading. With his family he moved to New London which was becoming a famous seaport. For twenty-five years there was peace in Connecticut and the family of Thomas Hall prospered. Before he retired from the sea he owned his own ship and two others. All three were engaged in trading voyages to the West Indies. Two of his sons, Samuel and Philip, were ship captains sailing their father's vessels. Both had begun as cabin boys and had worked their way up as seamen, second mate, first mate, and finally to captain. They knew the West Indies better than they knew Connecticut and had spent almost as many years afloat as on land.

THE SPANISH WAR – 1739-1748

A new war broke out in 1739 between England and Spain and the colonies were called on to furnish men and ships for an attack on the Spanish city at Cartagena in Colombia. It was natural that such skilled captains as the Halls would be called on to take charge of one of the Connecticut ships. Philip volunteered. The fleet that finally reached Jamaica was very strong, some 60 fighting ships and as many transports. One of the transports was commanded by Philip Hall.



The attack on Cartagena was a failure. Here the artist has sketched the naval part of that attack.

The attack on Cartagena was a failure that cost many lives. Returning northward the fleet attacked and captured Havana. Sickness struck among the soldiers crowded together on the little transports and killed far more men than had died in battle. Only one tenth of the Connecticut force that set out returned. Captain Hall was one who returned, but he was so weak from illness that it took him over a year to recover. When he did, he returned to sea. Sailing a ship around New England had now become very dangerous. The French had a strong naval base northeast of New England at Louisbourg, on Cape Breton Island. From this base a number of French privateers sailed. These armed warships hunted down and captured every colonial vessel they could find. Twice Captain Hall was chased by privateers and escaped.

Early in 1745 the Governor of Massachusetts made plans to send an army to capture Louisbourg. Again Connecticut was called upon for men and ships. This time Captain Hall was asked to command an armed sloop. Like all Connecticut sailors who had been threatened on the seas by the Louisbourg warships, he was very happy to share in an attack on this base. When the fleet arrived at Louisbourg they laid siege to the fortress. It surrendered in June 1745, after a long siege. Very few Connecticut men were hurt on this expedition. New England troops garrisoned the fortress for the duration of the war. In the peace settlement it was returned to France.

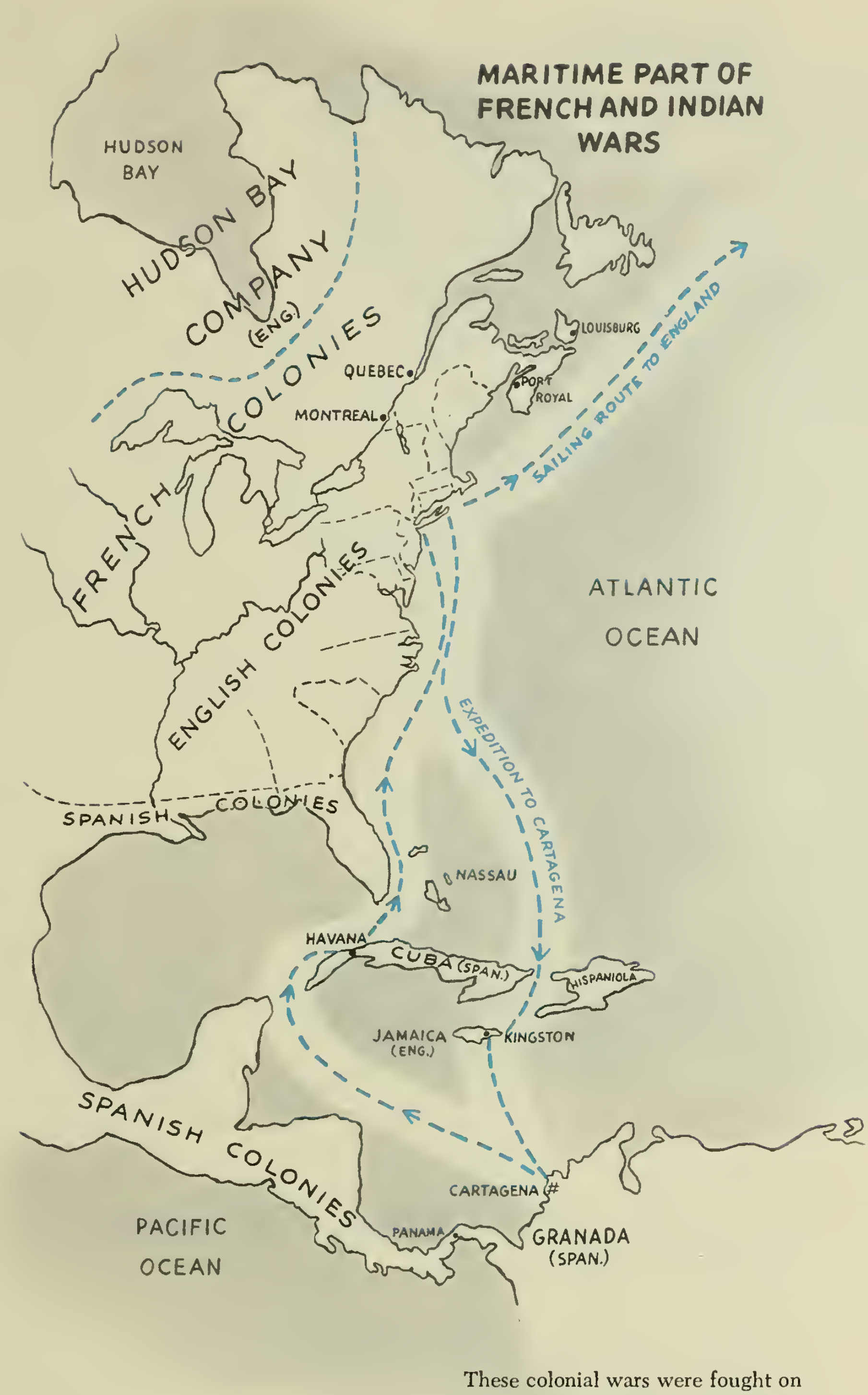
FRENCH AND INDIAN WAR – 1755-1763

The last war between the French and the British on the North American continent began after only a short period of peace. The fighting started in western Pennsylvania when a British and colonial force under General Braddock was defeated at Fort Duquesne in 1755. For the fourth time the English king called upon the colonies to supply men for an attack on Montreal. Connecticut made a great effort and this time raised over 2,000 troops.

Four Halls served in this war, two on land and two at sea. Philip's older brother, Samuel, had married in 1730 and had three sons. Two of the sons, Arthur aged 22, and Harry aged 20, answered their state's call for volunteers. Both served under Israel Putnam of Connecticut. The army marched to Albany, N.Y., as Connecticut troops had marched so many times before. From here the plan was to go north to Lake Champlain and up the lake by boat to the St. Lawrence River. The English and French armies met near Lake George, and one of the fiercest battles of our history was fought, ending in a complete defeat of the French forces. The Connecticut troops were in the thick of the fight and Harry Hall was killed. In spite of this success the British were too cautious and did not follow up their victory. They built two forts that summer and then withdrew to Albany for the winter. The Connecticut troops were allowed to return home. Arthur came, bearing the sad news of his brother's death.

In the following spring Arthur returned again to Albany with the soldiers of Connecticut. There was little fighting that summer. When the army went into winter quarters, the colonial troops were again sent home. In those days fighting was carried on during the warm months, and the armies went into winter quarters when snow began to fall. Heavy snows in the woods closed the Indian paths, and the settlers were usually able to relax once winter had set in. During the next two summers Arthur and the Connecticut forces marched to Albany each year. In the campaign of the fourth year Arthur was captured with Israel Putnam and carried to Montreal where he remained a prisoner until the British captured the city in 1760.

Meanwhile, Philip Hall was active in the maritime part of the fighting. He served as a ship captain of a transport vessel on both the unsuccessful attack on Louisbourg in 1757, and on the successful attack of 1758. The following year the fleet went on to capture Quebec. Captain Hall died as the result of an explosion on his ship at Quebec. His son, Philip Jr., who had accompanied him as first mate, took over the ship. After spending the winter frozen in the ice at Quebec, Philip Jr., now Captain Hall,



These colonial wars were fought on sea as well as on land. At various times in these years British fleets attacked Havana, Cartagena, Port Royal and Louisburg. Connecticut men took part in every one of these expeditions.

A French officer points out to his Indian followers the unsuspecting English settlement they are about to attack. It was these terrible yearly raids that made the New Englanders call these four wars the French and Indian Wars.

had the pleasure of rescuing his cousin Arthur when the British captured Montreal.

With the loss of Montreal the French were finally driven out of North America. Both Arthur and Philip Hall remained in military service for two more years and took part in another expedition against Havana. Arthur was with Israel Putnam when he was wrecked on the coast of Cuba, but was one of the few men rescued. His cousin, Captain Hall, was less fortunate.

He died in the wreck. Arthur returned home safely to Connecticut where he settled down on the family farm in Haddam.

When peace was signed, the French gave up Canada. The long series of wars which the colonies had had to fight to protect themselves against the French and their savage Indian allies thus came to a successful end. Each of them had taken a toll of Connecticut lives, often at places far removed from the state. Several times the victories won on the battlefield were lost when the places captured were handed back to the French at the end of the war. Now all the northeastern part of the continent was under the rule of the same nation, England. For the first time the settlers felt safe from Indian attack. Beginning with John Mason Hall, four generations of Halls had fought for Connecticut against the French and Indians. In each generation at least one Hall had sacrificed his life in war; by accident, sickness, or wounds. As a result of their bravery and that of many other Connecticut men, the state was able to grow and develop, free of the terrors of war, until the Revolt against England.

THE REVOLUTIONARY WAR

Connecticut soldiers, led by General Israel Putnam, fought in the battle of Bunker Hill.

CHAPTER 5

THE REVOLUTIONARY WAR

The year 1763 marked the end of a long series of wars with the French over who should rule North America. The English won and the French were forced to leave Canada, which now became an English colony like Connecticut and Virginia. While the people of Connecticut were celebrating this victory, they did not realize that a new struggle was beginning. This struggle would end only with the creation of a free and independent United States of America.

For over 130 years Connecticut people had been proud to call themselves Englishmen. Most of them had English ancestors. They spoke English, read English books, wore English style clothing, told English jokes, and lived by English laws. They rejoiced at English victories and were unhappy at English defeats. But, without quite realizing what was happening, the people of the colonies and the people of England had grown apart.

Between 1763 and 1775, a number of events happened that were to drive the colonists and the people of England even further apart. It is a long and complicated story. Perhaps it would be easier for you to understand if it were told as a story about one family. When the children of a family grow up and move away from home they become independent. Although the parents continue to be interested in their children, they usually give up their rights to tell grown children how to live.

In our story the grown children had moved a long way from home, three thousand miles away across an ocean. They bought land, built houses and were living their own lives. The parents of our story did not realize how independent their children had become. They continued to order them about as they had done when the children were small. They tried to tell these grown children how to use their land, what to plant, what they could make, and what they couldn't make in their workshops. The parents told the children how much money they would have to send home. All these orders upset the children. When they refused to do some of the things the parents ordered them to do, the parents became angry. Now the parents tried to force the children to obey them by punishing them. This brought on a real break between them. It developed into a struggle. This was a struggle for independence.

The people of Connecticut objected strongly to some of the laws passed by the English Parliament. Here a crowd of citizens show their dislike for the Sugar Act.

In our real story, as you have guessed, the parents represent England and the children are the colonies. The orders that England tried to force on the colonies are listed one by one in the Declaration of Independence. Although you may not be able to understand all the words, try and read it for yourself; or get someone to read it to you and explain the parts you don't understand.

Several of the orders that England sent over hurt the people of Connecticut. England forbade the manufacture of certain goods in the colonies. She did this to force the colonists to buy these goods from her. To the people of Connecticut, forbidding the manufacture of iron was the most damaging. The iron resources of northwestern Connecticut had recently been discovered and iron was being mined and worked into many useful articles such as plows, axes, shovels and the like. Many of the master iron-makers of Connecticut were thus forced to go out of business by this new law.

All of Connecticut was hurt by the Sugar Act of 1763 in which England tried to tax the trade between the colonies and the West Indian islands that were owned by France, Spain, and Holland. This trade brought Connecticut most of her income. She sold lumber, fish, and farm products to the planters on these islands and took in payment, molasses. The molasses was brought to Connecticut and made into rum, which was in turn sold to other customers in the colonies or in Canada or Africa.

A crew of soldiers from a Connecticut ship have just landed a cargo of salt pork on a beach in the West Indies. It was this trade, so important to all of Connecticut that the English were trying to tax.

The tax placed on this trade was so high that it stopped the trade. Connecticut farmers, lumbermen and fishermen were all hurt because they lost the market for their goods. Connecticut traders were forced out of business, as were local manufacturers of rum.

Two other taxes were passed by the English Parliament that the colonists objected to. These were the Stamp Tax of 1764 and the Tea Tax of 1773. Connecticut people objected to both of these taxes because they had no share in deciding on them. England put them into effect without asking the colonists' permission. The colonists felt that no one had the right to tax them except their own legislatures.

Connecticut men show here their dislike for the Stamp Tax by burning the stamps.

Opposition to these tax laws became more and more violent in the colonies. To prevent the distribution of the stamps, many Connecticut men joined clubs in each town and called themselves "Sons of Liberty." These clubs forced the officials to agree not to use the stamps. In some cases they seized and burned the stamps themselves. To show the English how strongly they felt about the stamps, they agreed not to buy any English goods until the tax was given up. When British manufacturers and merchants found out they were not selling any goods to the colonies, they forced Parliament to withdraw the Stamp Tax.

This was the night when the paleface redskins made salt water tea in Boston harbor.

After the Stamp Tax was given up, things went quite smoothly for several years. But England continued to believe she had the right to tax the colonies, and the colonists continued to feel that she didn't have that right. More trouble was bound to come. It came when England put a tax on tea and sent several shiploads of tea to the colonies. She felt that since the colonists loved tea so much they would be willing to pay a tax to get it. In this the English rulers were wrong. When the ships sailed into American harbors they found crowds of men on the wharves who were determined to prevent the landing of tea.

In Boston the Americans went further. A number of men dressed themselves like Indians, boarded the ships and threw the tea into the harbor. This was the Boston Tea Party, when "the tea brewed with salt water." Similar tea parties were held in New York, Charleston, South Carolina and in New Jersey.

In the eyes of the British government the colonists this time had gone too far. Since New England had taken the lead in opposing the tax laws, and since Boston had destroyed the first tea, they decided to punish that city. They ordered the port of Boston closed to all shipping and sent naval vessels to enforce the order. The British hoped to frighten the Americans into obeying the orders of the English king and parliament. But they badly misunderstood the colonists.

The very severe punishment merely made all the colonists very angry and created a great deal of sympathy for the people of Boston. Meetings were held in all of the colonies and each colony promised support for Boston. To supply the starving people, food was sent from all along the seaboard. Since it couldn't be sent in by sea, the ships were unloaded in ports of Rhode Island and Connecticut and the food was sent overland by road to Boston. Almost every road leading into Massachusetts was filled with herds of cattle, sheep and pigs, or wagons laden with grain.

Hundreds of Boston bound wagons of food and herds of cattle show how strongly Connecticut people supported the people of Boston.

Connecticut men were as willing to support the people of Boston with arms as with food. Here Connecticut citizens led by General Putnam start for Massachusetts.

In 1774, the colonists remembered how successful they had been ten years earlier, in getting Parliament to give up the Stamp Tax by refusing to buy English goods. They decided to try the same method again. A meeting of leaders from all the colonies took place at Philadelphia in September, 1774. It was called the Continental Congress. After much debate the Congress agreed not to import any goods from England until the Boston Port Bill was given up. It also agreed that if fighting started in Massachusetts, that all the colonies would come to her aid.

Meanwhile in Boston, several British regiments under General Gage occupied the city. Quarrels between the soldiers and the citizens of the city were daily events, but no blood was shed. Outside of Boston everyone was busily preparing for the expected war. Supplies of powder and lead were gathered together. Rumors of mistreatment of the people of Boston by the soldiers were widespread. On one occasion the rumor that Gage's soldiers were killing the citizens of Massachusetts brought General Israel Putnam of Connecticut marching with hundreds of armed militia to their rescue. When the rumor proved to be false, they turned back. However, the readiness of the people to take up arms showed that the country was like a powder keg, and that any spark might set off a war.

The spark came April 19, 1775. A British force marched from Boston to seize a store of powder that the Americans had gathered in Concord. They also had orders to capture the leaders of the Massachusetts patriots, John Hancock and Samuel Adams.

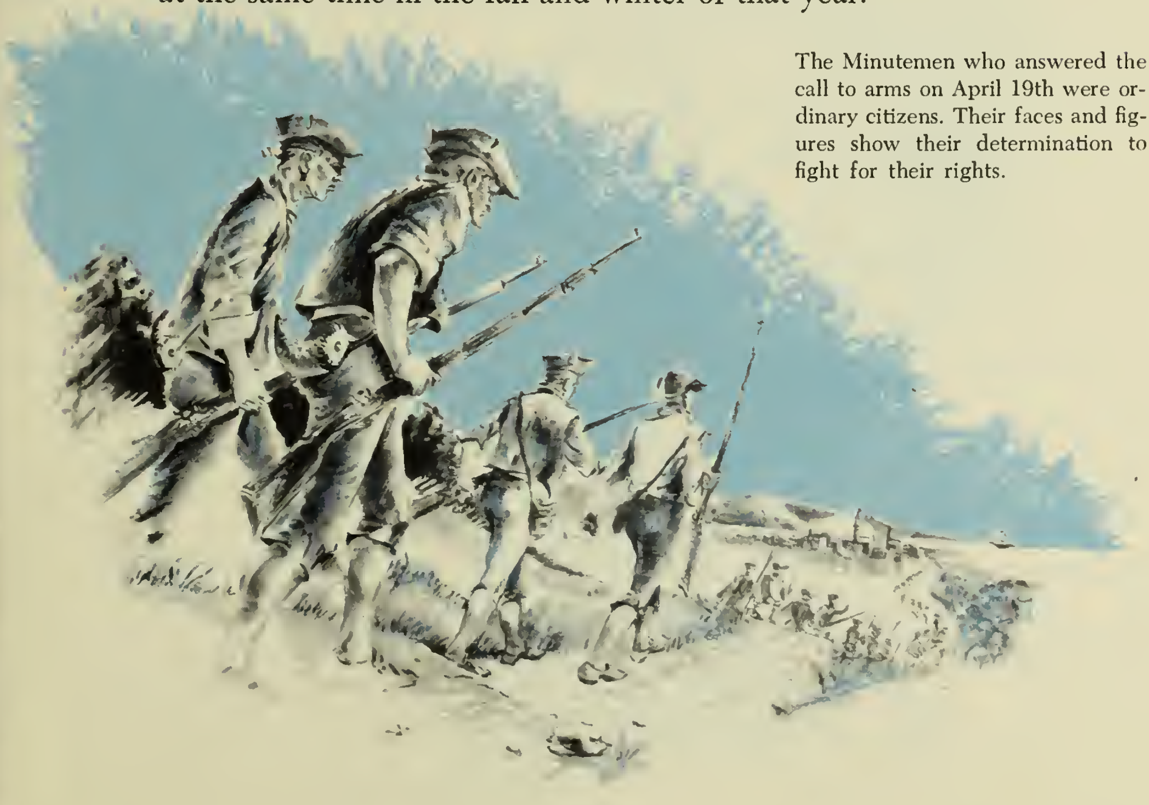
One of the most thrilling rides in American history, Paul Revere's dash through the Massachusetts countryside to warn people of the coming British attack on Concord and Lexington is shown here.

The countryside was aroused by the two famous riders, John Dawes and Paul Revere. When the British arrived at Lexington, they found a small group of militia lined up on the common, ready to defend themselves. Somebody fired a shot, and then firing became general. Several Americans were killed. The British force then marched on to Concord but were stopped by an attack by American minutemen before they destroyed the powder. On the way back to Boston they had to fight a continuous battle as America militia from the entire surrounding area swarmed like wasps around the British column. None of the British would have reached Boston except for a reinforcing company that came out to save them.

Almost before the shooting died down, the news of the battle began to spread. That night the hills around Boston came alive with watchfires as hundreds of American militia arrived to besiege the British force. By the morning of April 20th, there was an army of several thousand men on guard.

The news of Lexington spread like wildfire. It reached Connecticut early in the morning of the 20th, New Haven by the 21st, and travelled as fast as a horse could gallop or ships could sail to all parts of the colonies. War had begun. The response of Connecticut was an immediate despatch of men, supplies and munitions to the army gathering around Boston. General Israel Putnam was plowing a field when he heard the news. Leaving his plow in the furrow, he unharnessed his horse, jumped on its back, and, stopping at his house only long enough to pick up his gun and say goodbye, departed for Massachusetts. He arrived at Cambridge on the 21st. How many Connecticut men joined him is difficult to find out, but it is estimated that at least 4,000 from our state took part in the Boston campaign. Many took part in the battle of Bunker Hill where Putnam issued his famous order, "Don't fire until you see the whites of their eyes."

Connecticut played a valiant part in the war that followed. The capture of Fort Ticonderoga, Crown Point, and St. John, three strong points on Lake Champlain, was planned and carried out by Connecticut men led by Ethan Allen in May 1775. Later in the same year Benedict Arnold led a force of men through the Maine woods to attack Quebec. Connecticut troops served in this expedition. They also joined the one that traveled the path so many Connecticut men had walked before, west to Albany and north against Montreal. Both expeditions marched at the same time in the fall and winter of that year.



The Minutemen who answered the call to arms on April 19th were ordinary citizens. Their faces and figures show their determination to fight for their rights.

To explain the part that Connecticut and its people played in the war, we need maps. The major campaigns of the war are drawn on the maps in the next figures. They can be divided up into several parts.

I. The year 1775-76

Siege of the British in Boston; they left March 17, 1776.

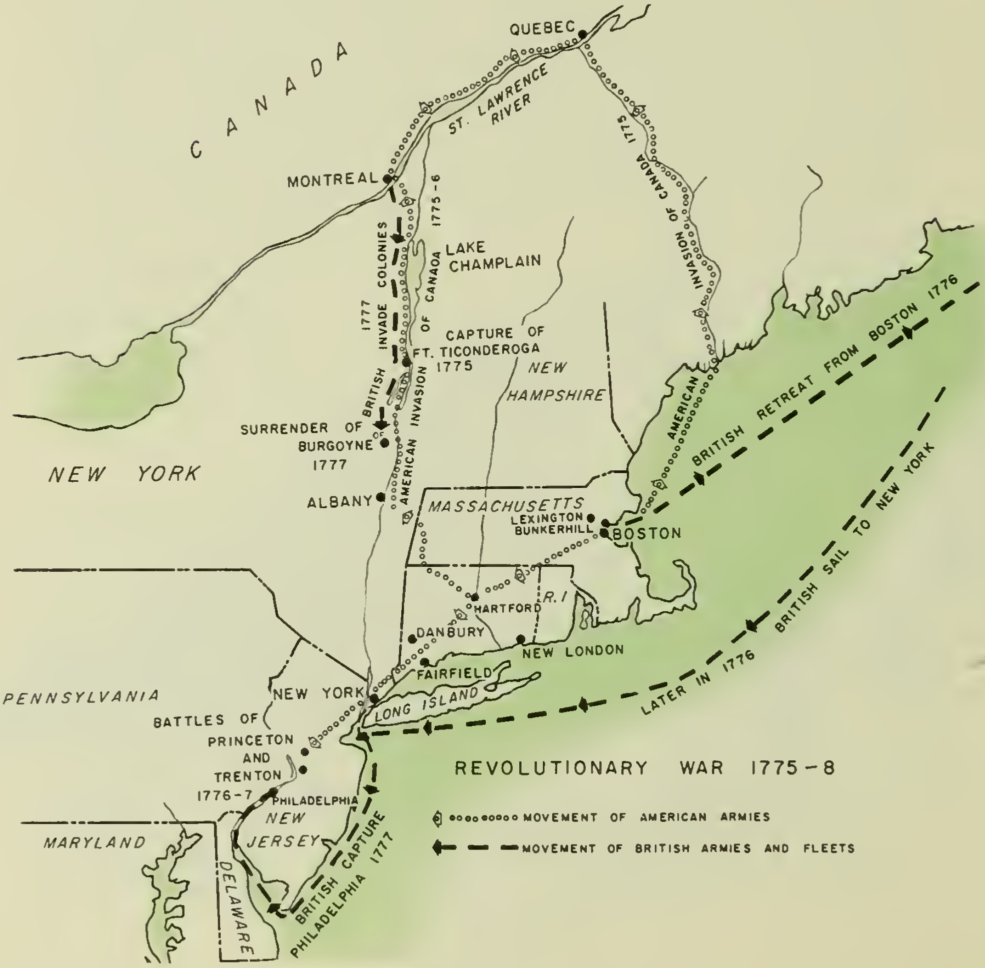
Attempt by the Americans to capture Canada, fall and winter of 1775-76, partly successful (we captured Montreal); we withdrew in the spring of 1776.

II. The years 1776-78

The British occupy New York and Philadelphia.

The battles in New York, New Jersey and Pennsylvania.

The British invade the colonies from Canada by way of Lake Champlain, ending with the surrender of the British under General Burgoyne at Saratoga, New York.



III. The years 1778-81

The British expand south and capture Savannah, Georgia, and Charleston, South Carolina.

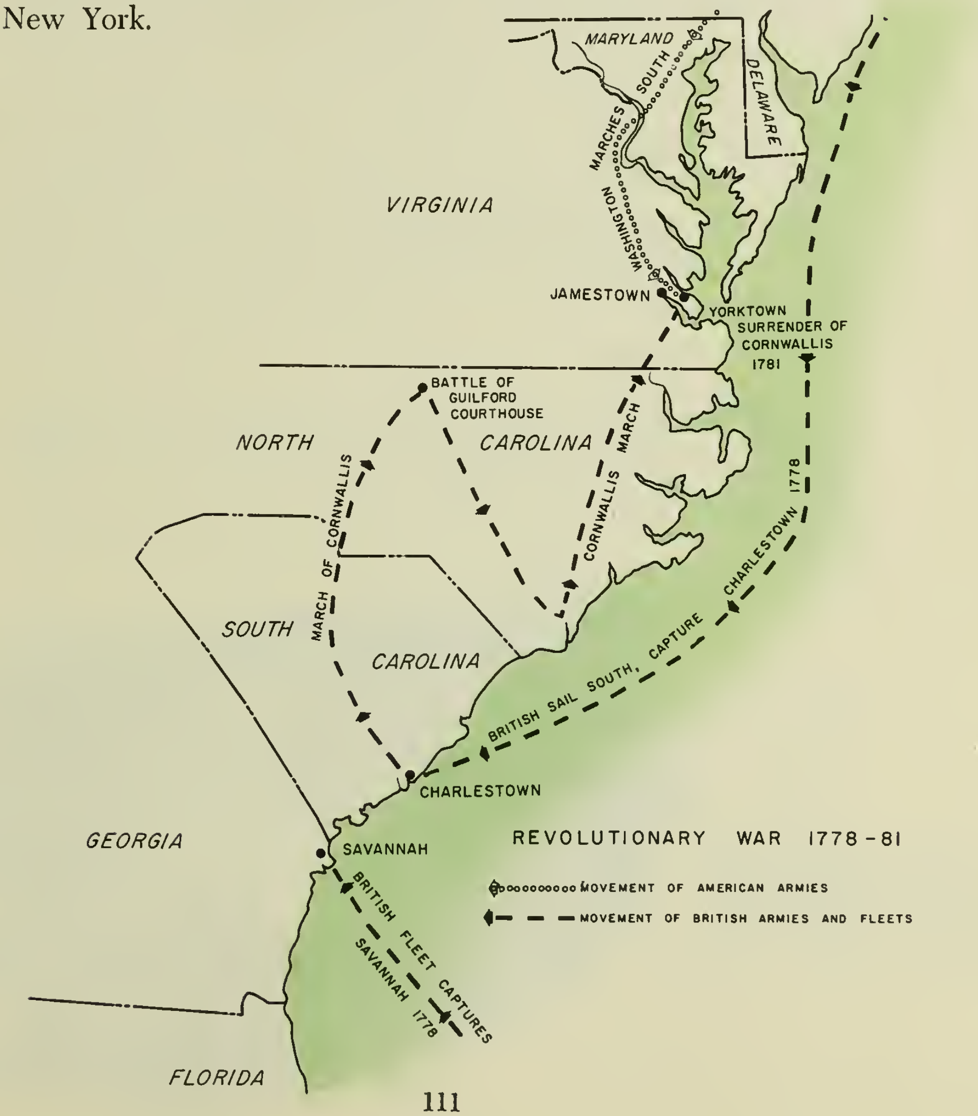
The French, Spanish and Dutch join the Americans to fight the British.

The British continue to occupy New York until the war ends.

Battles in the south end with the surrender of the British under General Cornwallis at Yorktown, Virginia.

IV. Peace signed September 1783.

Connecticut men played a brave part in the war. After Washington, one of the best known American generals was Israel Putnam of Connecticut. In Boston, he commanded the American forces at Bunker Hill and was also in the battles around New York.


MARYLAND
DELAWARE
VIRGINIA
WASHINGTON MARCHES SOUTH
JAMESTOWN
YORKTOWN SURRENDER OF CORNWALLIS 1781
BATTLE OF GUILFORD COURTHOUSE
NORTH CAROLINA
CORNWALLIS MARCH
MARCH OF CORNWALLIS
SOUTH CAROLINA
CHARLESTOWN
BRITISH SAIL SOUTH, CAPTURE CHARLESTOWN 1778
GEORGIA
SAVANNAH
BRITISH FLEET CAPTURES SAVANNAH 1778
FLORIDA
REVOLUTIONARY WAR 1778-81
MOVEMENT OF AMERICAN ARMIES
MOVEMENT OF BRITISH ARMIES AND FLEETS

Benedict Arnold was a valiant soldier in the early part of the war and was largely responsible for our victory over Burgoyne. Later, for reasons still largely unexplained, he became a traitor to the American cause. One of his old soldiers, when he heard of Arnold's treason, was asked what he would do if he captured Arnold. He answered, "he would cut off the leg that was wounded at the battles of Quebec and Bemis Heights, bury that with military honors and hang the rest of him to the nearest tree."

Colonel Thomas Knowlton of Ashford, Conn. had fought in the French and Indian War and directed the construction of the rail breastworks at Bunker Hill. Later, upon the American defeat on Long Island, Knowlton organized a picked group of 130 volunteer officers and men called "Knowlton's Rangers." His appeal one day for someone to secure much-needed information from within enemy lines, was answered by a young Connecticut captain, Nathan Hale. Disguised as a schoolmaster, he slipped through the enemy lines and drew maps of their entrenchments. When he was captured with the maps he proudly revealed his name and rank. After a British court-martial he was hanged as a spy. We remember him for his answer, when asked in his last moments if he had anything to say. His words were, "I only regret that I have but one life to lose for my country."

Many others, whose names are also worthy of being remembered fought bravely during the war. Their names appear throughout Connecticut's history.

One of Connecticut's most famous patriots, Nathan Hale, is shown here at the moment of his capture on the Long Island shore by a boatload of British soldiers.

Some of the fighting was done by the "minutemen." These were men who agreed to march to war at a minute's notice. They were the ones who drove the British back into Boston after the battle of Lexington. Between battles they would go home. As any of your friends or relatives who served in the armed forces will tell you, soldiering is largely sitting around, waiting for something to happen between battles. In the Revolution, too, there was a lot of sitting around. Many of these minutemen felt they were more useful at home working on their farms than sitting around at the forts. So, after the fighting stopped they would pick up their guns and go home.

You really can't fight a war successfully this way. You need soldiers who will be around all the time. When the news of Lexington reached the Continental Congress in Philadelphia, they named George Washington as Commander-in-Chief and sent him to Boston to take charge of things. At the same time they asked the states to furnish soldiers for the new Continental Army. These soldiers would have to enlist for a fairly long period, six months to a year, or even three years. Out of Connecticut's total population, about 200,000 in 1775, she furnished 32,000 soldiers to the Continental Army during the war. Some of these men enlisted more than once, but others fought as minutemen without enlisting. As far as we can find out, over one-half of the adult male population served in the army at one time or other during the war. Connecticut regiments (this word means a group of several hundred men organized for war) served in every one of the major battles of the war in the north, and some marched south with Washington in 1781 to help capture Cornwallis and end the fighting.

We supplied a large share of the ships that fought the war at sea. Most of these were privately owned and manned by volunteers. These privateers, as they were called, sailed the seas and attacked and captured any small British vessels they could find. Many of the ships they captured were bringing war supplies to the British army. These supplies were very useful to us in the war. We also built and manned four larger ships

Such naval battles happened many times between American and British ships of war.

called "men-of-war" that carried many guns and could fight the ships of the British navy.

In addition to men and ships, Connecticut supplied so much food to the army that she became known as the "provision" state. We have already seen how the Connecticut farms sent food to Boston. Our iron industry in northwestern Connecticut manufactured cannon and cannonballs and the lead mine in Middletown furnished lead for bullets.

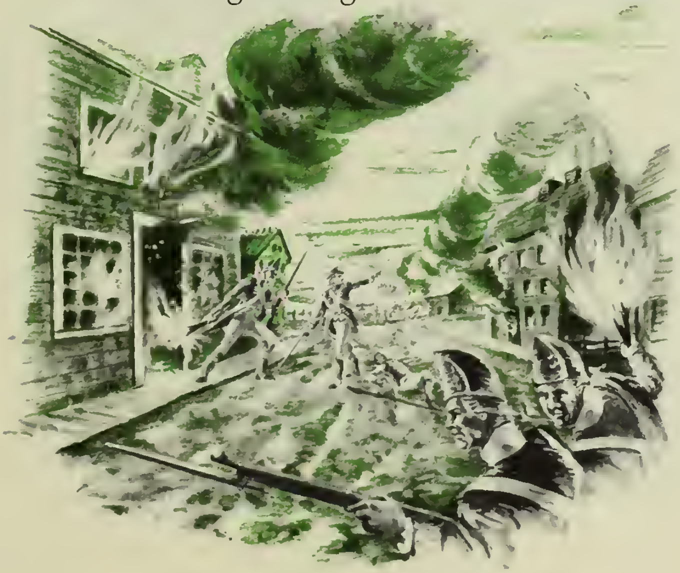
Most of the war was fought between the American and British armies and no major battles were fought on Connecticut soil. A number of smaller battles were fought here, however. Because Connecticut supplied food and munitions to the Continental Army, we often had large quantities of these supplies stored at various places in the state. Hearing about the store of supplies at Danbury the British sent a small army of men by sea to destroy them. Landing 2,000 men at Fairfield April 26, 1777, the British marched north to Danbury. The American minutemen began to gather to oppose the British, but we couldn't get enough together to save the supplies. The British army captured Danbury, burned the supplies along with part of the town, and started back to the coast. By this time the American army had arrived and several sharp battles were fought as the British retreated to the coast where they rejoined their ships.

Although the danger of more attacks on the coast of Connecticut was a constant worry to the people, the British didn't try to raid the coastal towns again for two years. Then in February 1779, Governor Tryon, who had led the British in the Danbury raid, landed a force of soldiers from his ships at Greenwich. He destroyed the saltworks and a number of other buildings before leaving. General Israel Putnam, who was spending the night near Greenwich, led the Americans who tried to fight off the British attack.

On July 5, 1779, Tryon made a similar attack on New Haven. Forces were landed from a large fleet at two points, in West Haven and in East Haven, and marched against the city of New Haven. American volunteers, including a company of Yale students, attacked, but could not stop the strong British armies. The British occupied the city, spent the night, and then retreated after burning a number of warehouses stored with food.

Two days later they landed a second time at Fairfield. The few Americans on guard fought valiantly but were unable to stop the landing. Angry at the resistance of the Americans, the British burned the town when they left. Over 200 houses, stores, barns and other buildings were destroyed and most of the population were left homeless.

On July 11th they attacked Norwalk where the Americans who had been gathering from the inland towns to protect the



One of the senseless acts of destruction that created hatred of the British troops was the burning of Norwalk. In the background lies the British fleet to which the soldiers are retreating.

coast put up a stiff fight. Here, too, the British burned the whole town as they left. Norwalk was a larger community than Fairfield and more than 250 buildings were destroyed.

By this time people along the entire Connecticut coast were alerted and minutemen were marching south from the inland towns to protect them. Also, General Washington sent part of the Continental Army to help. The presence of these trained soldiers at Stamford prevented the British from destroying this town too.

Again a two-year period of uneasy peace followed along the Connecticut coast. Then in September 1781, a British fleet descended on New London and landed troops on both the east and west sides of the mouth of the Thames River. The town of New London was easily captured and burned. On the opposite shore, in Groton, an American fort with 150 Connecticut soldiers resisted bravely. The British, angry at this stubborn fight, put many of these American soldiers to death after they finally surrendered. This shameful episode has been called the Massacre at Groton. Only about 10 of the Americans in the fort escaped being killed, wounded or captured.

An early stage of the fighting at Fort Griswold.

Cornwallis surrendered to General Washington and our French allies at Yorktown, Virginia on October 19, 1781. This was the end of the fighting. The peace treaty was signed in 1783 and the colonies were finally independent. The help given us by our ally France and our own stubborn resistance in a hundred battles had won us the war. From this time on we were free to run our own affairs.

Although we welcomed this freedom, we were to learn that independence brings as many problems as it solves. Being independent and making our own decisions was more difficult than we thought it would be. Although the colonies were willing to cooperate in fighting the war, after they had gotten freedom they all wanted to have their own way. The new states objected to being told what to do by Congress just as they had objected to England ordering them around. It took several years and a new government, based upon the federal constitution, to bring them together. The United States came into existence formally when the ninth state accepted the Constitution. George Washington was the unanimous choice for our first president and he took office on April 30, 1789. We had followed him to victory in war, now we were to follow him in peace.

CONNECTICUT AFTER THE WAR

While the colonies were fighting for independence and while the nation was being organized, Connecticut continued to grow. Her population by 1800 reached a total of over 250,000 people. They were distributed around the state in a fairly even fashion. Only the middle valley of the Connecticut River and the coastal regions were densely populated. Most of the people were still farmers. The Connecticut valley region was better suited to farming than the rough hill counties in the western and eastern uplands. The coastal section supported a population of fishermen, whalers and merchants as well as farmers. Some of the upland towns had good farmland. Where the upland areas were broad and gently rolling rather than in steep slopes they made good cropland. Lebanon, Pomfret, Colchester, and Litchfield were prosperous agricultural towns in 1800. On the higher hills, in towns like Norfolk, Colebrook, and Union, there was very little cleared land. Naturally these towns had very few people.

Connecticut began to encourage manufacturing early in the century. The war period, when the people could not import the things they needed from England, helped encourage it too.

A scene of men at work in an early hat factory. It might equally well represent any one of several dozen such factories in Danbury, Norwalk or other nearby towns.

Most things were still being made by hand. Cloth was woven at home from yarn spun on the family spinning wheel. Many people in Danbury and Norwalk were making hats. In Bristol and Waterbury, clocks were being made and Meriden was already busy manufacturing the kitchen utensils that were to make her famous. In New Haven, Eli Whitney opened up his gun factory, making all parts of each gun by machinery. This was a tremendous step forward. All the guns he made were exactly alike. If a part was broken you could get a replacement from the factory. You did not have to fashion the part specially for your gun. This meant that things could be made faster, easier and cheaper.

The power of falling water was already known and used, but at this period it was used almost entirely to run grist mills (which ground up corn or wheat into flour) and saw mills. The machinery to apply it to other forms of manufacturing had not yet been invented. Practically every town had at least one grist mill and one saw mill and some towns had several. Other manufacturing plants concentrated on making cider, pressing oil out of flaxseed, breweries making beer and distilleries making rum. There were also many tanneries making leather that was later turned into shoes, saddles and harness. Most of these shops were one or two-man shops, very few had more workers. Wood ashes, produced in large quantities when the land was cleared, were used to make potash. Note that almost all these activities dealt with agricultural or forest products. These continued to be the main products of Connecticut for a long time.

The earliest mills used waterpower in an inefficient manner. The undershot wheel shown here should be compared with pictures of later types that developed more power.

BEGINNINGS OF INDUSTRY IN CONNECTICUT 1800 – 1850

CHAPTER 6

BEGINNINGS OF INDUSTRY IN CONNECTICUT 1800 – 1850

Almost one-half of the people of Connecticut today work in factories, but one hundred and sixty years ago there were virtually no factories in Connecticut. Most people then lived on farms and were farmers. One of the jobs of the historian is to explain why such changes come about. Sometimes this change in Connecticut, from a farming state to a manufacturing one, has been explained by blaming it on our soil. They say that the soil of Connecticut was too poor to support farming. This is not entirely true.

Connecticut has a number of different kinds of soil. Some of them are very good. The Connecticut valley region that was first settled is still being used for agriculture. In the upland areas, the level or gently rolling hill-tops had good soils, although they were stony; and the stones had to be removed before the land could be farmed. Once the stones were cleaned off the field and piled up in stone walls, the fields became good farm lands and many are still used today.

Our problem is that we have too much sloping land. When this land was first cleared of forest it often produced good crops. But gradually the farmers who cultivated these sloping fields

Erosion has exposed these large boulders after a number of years of crop cultivation on this sloping land. In the background are gullies created by running water.

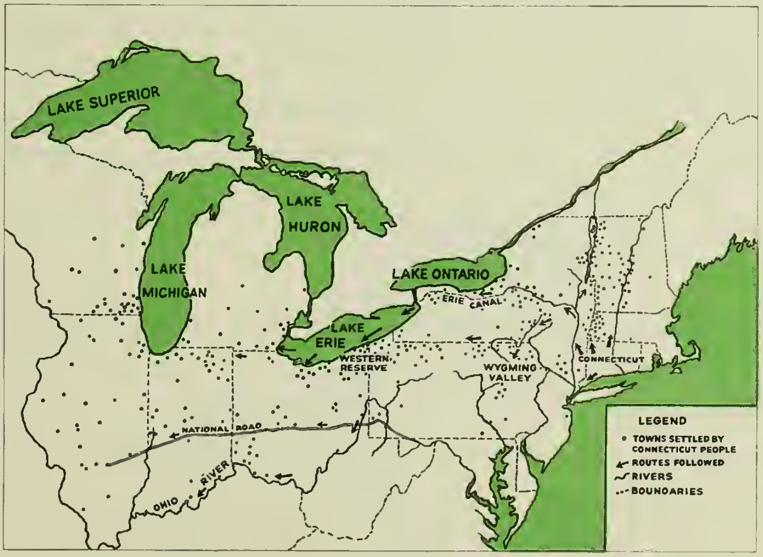
began to notice that they were not producing as good crops as they had first grown. Also, the fields seemed to be getting stonier and stonier. No matter how many stones the farmer picked up one year, the next year there seemed to be as many more on the top of the ground. Farmers claimed that stones grew in their fields.

You know that stones don't grow. What they were seeing was the result of erosion. After the forest was cleared away, and while the land was being used for crops, it was left bare during the late fall and winter. This permitted the rain which fell on the ground to run off, down slope, carrying the top soil away. The smaller particles of earth were carried by the running water and the larger stones were left behind. It looked to the farmer as if the stones were increasing in size. In this way, through erosion, some Connecticut soils did become poorer after they were used. When these sloping fields became too stony, the farmer would use them for pasture or let the forest grow back. Sloping land is best left as pasture or perhaps used to grow hay. In this way a cover of grass prevents erosion and the land can be used for many years. You can use sloping land for crops if the furrow is plowed across the slope rather than up and down it. We call this method *contour plowing*. The water can't flow down the slope. Instead it is caught in the furrow and sinks into the ground. Careless farmers can't be bothered with this. Their fields soon become eroded. Wherever you see a slope that is quite stony, you know that someone in the past was careless and spoiled that land.

To pull the wooden plow, that is illustrated in Chapter 9, through a heavy clay soil requires a great deal of animal power.

Our problem is not that our soils are all poor. It is simply that we did not have enough good soil for the number of people that were living in Connecticut in 1800. Our state had only 5,000 square miles of land. The average farm in Connecticut covered about 100 acres of land. Part of this was cropland and hayland, part was pasture, and the rest was woodland. This meant that each square mile supported about six farms, a statewide total of perhaps 30,000 farms and as many families. In 1800 we had 50,000 families and many people could not farm for a living. You will remember that even in the earliest days some people were fishermen, lumbermen, traders, or followed some other non-farming occupation.

By 1800 it had become necessary for some young people to choose other ways of earning a living than by farming. If a farmer living on an average size farm had six children, the farm would not be large enough to support them all when they grew up and started families of their own. If the sons of the family wanted to be farmers, they had to leave Connecticut and move to the frontier where land was plentiful. Many of them did this. Northern New England, New York, Ohio and other states were settled by people from Connecticut.



Many towns in the American midwest were founded by migrants from Connecticut. Each dot represents a town where Connecticut people settled.

One of the sons, or a daughter and her husband, could stay on the farm and help their father work the land. When he died, they would inherit the land. The sons who did not want to farm could turn to one of the other occupations that were becoming more and more common in the state. Some of these occupations you already know about: fishing, lumbering, trading and the like. Others included making special things for people or providing services that they wanted.

In any large group of people there will be some who have special skills. Some of you are skilled in making things out of wood and you enjoy making them. Others enjoy drawing or painting. A few of you are fishermen or hunters. This was also true in early Connecticut. Some men were skilled in working with wood or with iron, other men or women could make cloth, or shoes, or hats. Now that the farmers of Connecticut were growing more food than they themselves could eat, they were ready to exchange their surplus food for goods that they needed.

It was easier for a farmer to concentrate on growing food, buying the tools he needed instead of making them. This meant that certain men in each village could spend all of their time making axes, hoes, or other farm tools. They would then sell their products and buy the food they wanted.

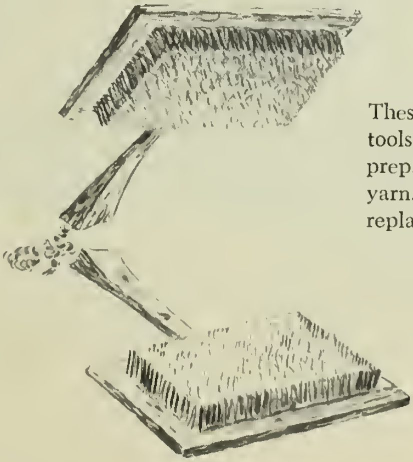
Some exchanges of this sort had taken place from the earliest days in the colony. Every large village had its blacksmith, wagon maker, and shoemaker. They also had people who provided services in little shops and mills. There were grist mills, where the farmer could get his grain ground up into flour. The saw mill has already been mentioned.

Another service was provided by the tanner. When a farmer killed his livestock in the fall for meat, he would remove the hide and take it to the tanner to make it into leather. Making leather was a special skill that few farmers bothered to learn. It was easier to take the skins and hides to the tannery. Here they were soaked in a vat of water that had tannic acid in it.

Tanning heavy hides involves a lot of hand labor. In the foreground the hides are soaking in vats filled with a tannic acid solution. A few hides are hung up to drain.

The acid came from soaking shredded oak or hemlock bark in the water. Connecticut forests provided plenty of this bark. The tanned leather could be used by the farmer himself to make shoes, harnesses, or other goods, or he could sell leather to specialists who made these things. There were 408 of these tanneries in 1810.

Almost every woman in the state spun yarn and wove cloth. It was not easy work. Before the end of the eighteenth century two new mills were set up that helped in this process. The first one prepared the wool so it could be more easily spun into cloth. This was called a carding machine. Wool, as it came from the sheep, was often dirty and always greasy and the fibers were tangled together. It had to be washed and the fibers separated before it could be used on the spinning wheel.



These wool cards are the hand tools used to comb out the wool in preparation for spinning it into yarn. Later the carding machine replaced these hand methods.

Most women in Connecticut were very well acquainted with this common household machine, the spinning wheel. These, too, were being replaced by powered machinery during the first half of the nineteenth century.

If the housewife did this herself, after she had cleaned the wool she used a handtool that looked like a hairbrush with bristles of iron wire. The job of straightening and untangling the fibers was done much as girls brush their hair. The carding machine was simply a better way of doing this job. The washed raw wool was put through a process that used several of these carding machines, and then the untangled wool was returned to the housewife, ready to be spun into yarn.

The second service took the homespun woven cloth that the women made on their looms and put it through what our ancestors called a *fulling process.* Homespun cloth was lumpy and uneven. The fulling process put the cloth in water, soaked it and pounded it to shrink it as much as it would shrink. Then it was washed and dried. The nap of the cloth was raised and sheared off with special shears to produce a smooth finish. If the customer wished, it could be dyed. Then it was folded, pressed and returned to the customer as finished cloth that could be made into clothing. In 1810 there were 184 carding machines and 218 fulling mills that served more than 16,000 home looms in the state. One family out of every three had a loom and there were probably just as many spinning wheels.

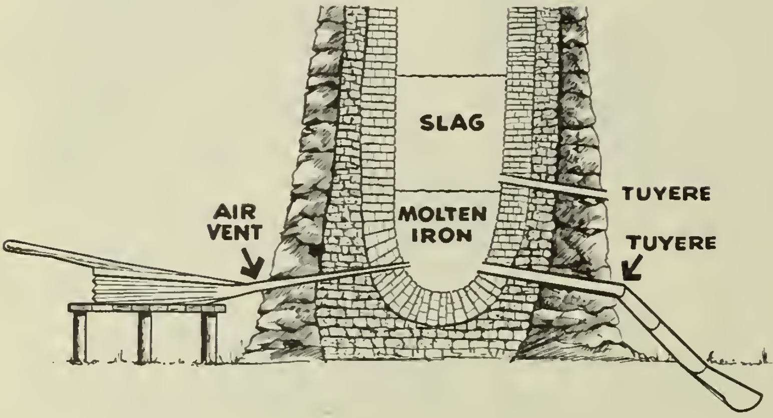
There were other types of manufacturing plants working on a small scale at this period of our history. In 1810 there were 560 distilleries. These shops turned the molasses brought from the West Indies into rum. Most of them were very small. They averaged less than a gallon of rum per day in production. In the seashore towns there were 19 ropewalks, making the rope used in the shipbuilding industry. The same number of paper mills were busy manufacturing paper from old linen cloth. One of the farm crops was flax. Its fibers were used to make linen cloth. The flaxseeds were pressed in 24 oil mills to produce linseed oil which is used in making paint. Gunpowder was being manufactured in 7 powder mills, and 12 potteries were active in making pottery and eating utensils.

Perhaps the most important of the industries of Connecticut at this period was the iron industry, which was concentrated in the northwestern part of the state. In the first chapter a

This is a view of the early iron industry of Connecticut. In the background may be seen two furnaces. The buildings in the foreground may be foundries turning out hollow ware (kettles), or forges making hoes, shovels, and axes.

special type of rock was mentioned that was found in northwestern Connecticut, limestone. Iron ore was found in this same area on top of the limestone. The first mine was opened in Salisbury about 1732. The ore was dug out and made into iron in forges. In 1762 Connecticut men built the first blast furnace at Lime Rock in the southern part of Salisbury. Although this furnace has been torn down, a number of others may still be seen in this part of the state. One is shown here.

The remnants of blast furnaces like this one may be seen today and explored at Roxbury, Kent, Sharon, and Mt. Riga.



This simplified diagram shows how a blast furnace worked. After the ore has been smelted it is ready to be drawn off. The slag is drawn off separately, through the top hole, and discarded.

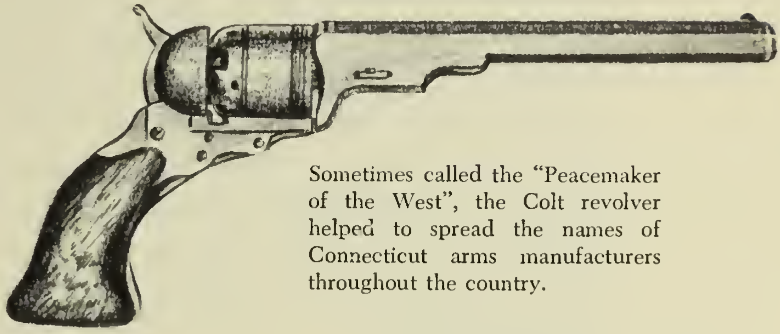
Iron ore was a mixture of rock, iron, and oxygen. The problem in manufacturing iron was to get rid of everything but the iron. To do this, the ore was heated in a furnace. The first furnaces were not large, they measured about 8 to 10 feet in diameter and 20 to 30 feet high. The inside was shaped like a water glass with two holes that could be opened or closed at the bottom. Through these holes the molten iron and molten rock could be drawn off. Other small openings near the bottom were provided so that air could be blown in from a bellows to make the fire burn hotter. Iron ore, charcoal, and limestone were loaded in from the top in layers, and the fire started at the bottom. The burning charcoal melted the iron which became separated from the other minerals and changed into a liquid form. The other minerals combined with the limestone to form slag. As the contents of the furnace burned down, more charcoal, iron ore, and limestone were added at the top. Every few hours the holes at the bottom were opened to draw off the molten (liquid) iron and slag. The molten iron flowed off into sand molds (pigs) where it cooled, forming what is known to this day as pig iron. At this early time in our history, the furnace at Lakeville, in Salisbury, produced 2½ tons of iron every 24 hours. Furnaces were run continuously for periods of many weeks, as long as the supplies of charcoal, limestone and iron kept coming. In 1810, the 8 furnaces operating in the state made about 4,000 tons of pig iron.

The pig iron made at the furnaces provided the raw material for a number of other manufacturing plants. It was heated again to make it soft. Then it was cut and shaped to make such articles as nails, axes, scythe blades, shovels, hoes, plows, and iron or steel bars of many kinds. Sometimes the molten iron coming from the furnace was poured into molds to make cannon, kettles, or similar cast iron goods. Litchfield county was the center of the iron industry, but blacksmiths all over Connecticut used the iron manufactured there to make things. Some of the pig iron was shipped out of the state. It usually went over the mountains to the Hudson River, only 30 miles away, and then down the river to New York city. It was much easier to ship such heavy material by water than to send it overland by horse and wagon.

TEXTILE MANUFACTURING

The one thing that people of Connecticut bought in the largest quantities and which they continued buying year after year was clothing. Most Connecticut people raised their own food. But even those who made much of their own clothing purchased their best clothing from stores. It was imported from England. In that country, during the 18th century, a number of inventions were made that completely changed the manufacture of cloth from an industry located in the homes to one that was carried on in factories. The new machines replaced the spinning wheel and simple looms that were formerly used. England made a great effort to prevent these machines or even drawings of them from leaving the country, but they couldn't keep men who knew how to make the machines from migrating to the new world. One of these men was Samuel Slater. He came to Pawtucket, Rhode Island carrying this knowledge in his mind. Here he set up a cotton factory to manufacture cloth. Other men also came from England with similar knowledge and set up cotton or woolen mills in other towns.

Men with imagination in Connecticut could see the advantages in building cotton and woolen factories. The factories produced better and cheaper cloth than the homemade kind. By 1810 there were 15 woolen mills and 14 cotton mills in operation. Since the first successful cotton mill in the United States was established in Rhode Island, it was perhaps natural that the section of Connecticut closest to that state would be the section to begin this new type of manufacturing. The valley of the Quinebaug River had just the combination that was needed. The river flowed rapidly, there were many undeveloped power sites to be bought, and it was close to the training center for people in the textile industry, Rhode Island. By 1818 there were over 60 cotton mills in the state, one third of them in this one valley. There were as many woolen mills, but they were more evenly distributed around the state. Textile making quickly became the most important kind of manufacturing in Connecticut.

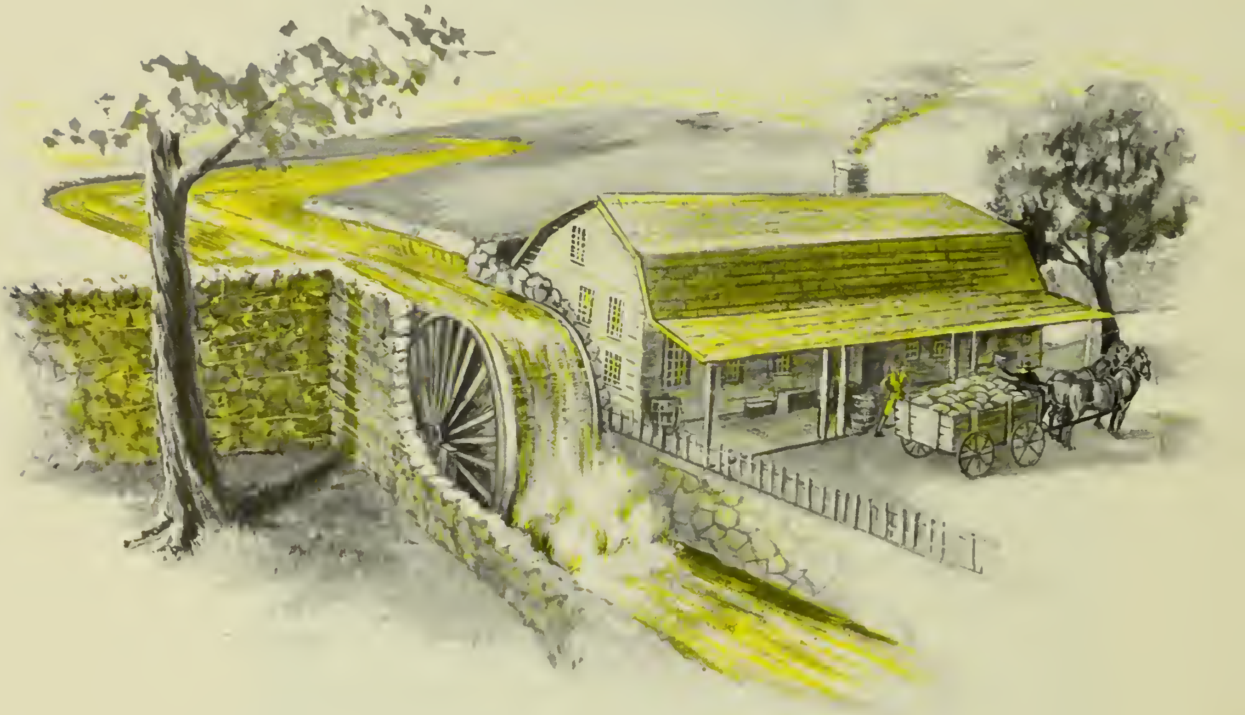


Sometimes called the "Peacemaker of the West", the Colt revolver helped to spread the names of Connecticut arms manufacturers throughout the country.

NEW INVENTIONS

Connecticut men are inventive. Ever since the very beginning of our state there seem to have been men who were curious and who experimented in trying to do things easier, faster or better. Many of their names have become familiar to all of us. We connect them with the industries that their ideas started. Some examples are Eli Whitney, the cotton gin and interchangeable parts for guns; Samuel Colt, revolvers; Eli Terry, Seth Thomas, and Chauncey Jerome, wooden and later brass clocks; Linus Yale, Yale locks; Charles Goodyear, vulcanizing rubber; Simeon S. Rogers, electroplating silver on other metals. Others, whose names are less well known were equally important in helping Connecticut become an industrial state. These included the Collins brothers, axe manufacturers of Collinsville; Elisha Root who worked first for the Collins brothers and later for Samuel Colt; Albert Pope, whose company manufactured the first bicycles in Hartford; Gardener Hall Jr., whose inventions established thread manufacturing in Willimantic. The first patent that the United States government gave was given to a Connecticut man. Every year since then, Connecticut inventors have added to the list. More patents are held by Connecticut than any other state.

Every town and every factory in the state has an interesting history behind it. Usually it began with one man, sometimes an inventor who started to make something on a very small scale. If his product was good, people began to hear about it and wanted to buy it. Gradually the owner of the shop had to expand his production by hiring more workers. Soon he needed more power to run the machines which he had often invented or built himself. This need turned his eyes to the main source of power in early Connecticut, water power. It was already being used to run grist mills, saw mills, and fulling mills. Connecticut men began to invent ways to use it in other industries too.



The overshot wheel (the water meets the wheel at the top) produced much more power than did the earlier types of waterwheels. Grist mills like this one may be seen today in several parts of the state.

The need for power drew the factories to the banks of the rivers. The river was dammed up, a little waterfall was created, and a water wheel was put in the stream. The earliest water wheels were placed directly in the stream and were turned by the normal flow of the river. A later invention developed the overshot wheel. In this type the rapidly flowing water was brought to the top of the wheel and pushed the wheel, partly by the force of its flow and partly by the weight of the water. Such wheels gave more power than the earlier ones.

Connecticut had all of the necessary ingredients for waterpower. For power you need plenty of water which comes from rainfall. This we have in abundance. You also need sloping land. Remember, Connecticut had more of that than was good for agricultural use. The numerous falls in the rivers, which prevented their use for navigation, made many posssible sites for factories. These little rivers could be dammed up above the falls. The water could then be conducted by a canal along the side of the stream to where the waterwheels were located. The higher the falls the greater the amount of power that was developed at the water wheel.

There was one problem. Although Connecticut had a very even distribution of rain throughout the year, there was a variation in the flow of the rivers. In the spring there was usually a flood, as described in the first chapter. By late summer and early fall the flow of water in the rivers was much smaller. The factory needed an even flow of water. This meant that someplace was needed to store water in the spring when it was abundant. Then, in the late summer and early fall, this stored water could be released to keep the water wheels running. Connecticut was very fortunate in this. A region that had been covered with a glacier had many ponds and lakes. These provided storage facilities that could be used. All that was needed was a dam at the outlet of the lake. The dam was closed in the spring and much of the water held in the lake. Later in the summer the gate of the dam was opened gradually releas-

Storage ponds were necessary to save up water in the spring to run mills during the summer and early fall. Here two men are opening a sluice gate to let water into the canal that leads to the waterwheel.

ing the water as it was needed down stream at the factories. In this manner the factories could keep going throughout most of the year. Even in the winter the rapidly flowing water did not freeze. Although the surface of the lake did freeze over, water could be drawn out from underneath the ice. In exceptionally cold weather it was necessary to close down the waterwheel because the spray would freeze on it and stop its movement.

The textile mills were the first real factories. Most of the manufacturing in Connecticut before 1800 was done in one-man handicraft shops, usually lacking in power and machinery, or in small mills that merely changed the form of an agricultural or forest product. A *factory* takes several raw materials and by using powered machinery turns them into a finished product. It also employs a number of people who run the machines. These people work under the direction of a foreman or boss. The early cotton and woolen mills were small, with 15-20 workers. Later they expanded in size. By 1845, some had more than 100 men, women and children working in the same building. Today, as you probably know, some factories employ thousands of people.

A second important change came with the gun factory that Eli Whitney set up in New Haven. Whitney had the idea that many of the things people needed and were producing by hand could be turned out more quickly and better by machinery. By using machines, each individual item or each part that was produced would be exactly the same as any other. Where

Men, women and children worked in the early textile mills. The hours were long, from sunrise to sunset, six days a week.

the thing was complicated, like a gun, this was a great advantage. If one part of a gun broke, all you had to do was replace the part. You could buy the replacement easily in a store. Before Whitney began to make his guns, if a part broke you had to take your gun to a gun maker who slowly manufactured a part to fit your particular gun. It would not fit any other gun. Since this involved great skill on the part of the gun maker it was an expensive business.

The third change came in the way work was divided. In handicraft work, one man made the entire thing himself. Many of the new machines that were constructed for the factories were very simple to operate. They made one small part, say, the trigger of the gun. Near this machine would be another that made the barrel, and a third that made a third part, and

This sketch illustrates an early forerunner of the assembly line. Each man had a special job, some made parts, others put the gun together.

so on. Men or women who operated these machines would turn out the parts. Someone else would put them together to make the finished gun. Dividing the total job up into a number of small jobs was the first step toward our modern method of mass production. Mass production meant production of larger quantities at lower prices.

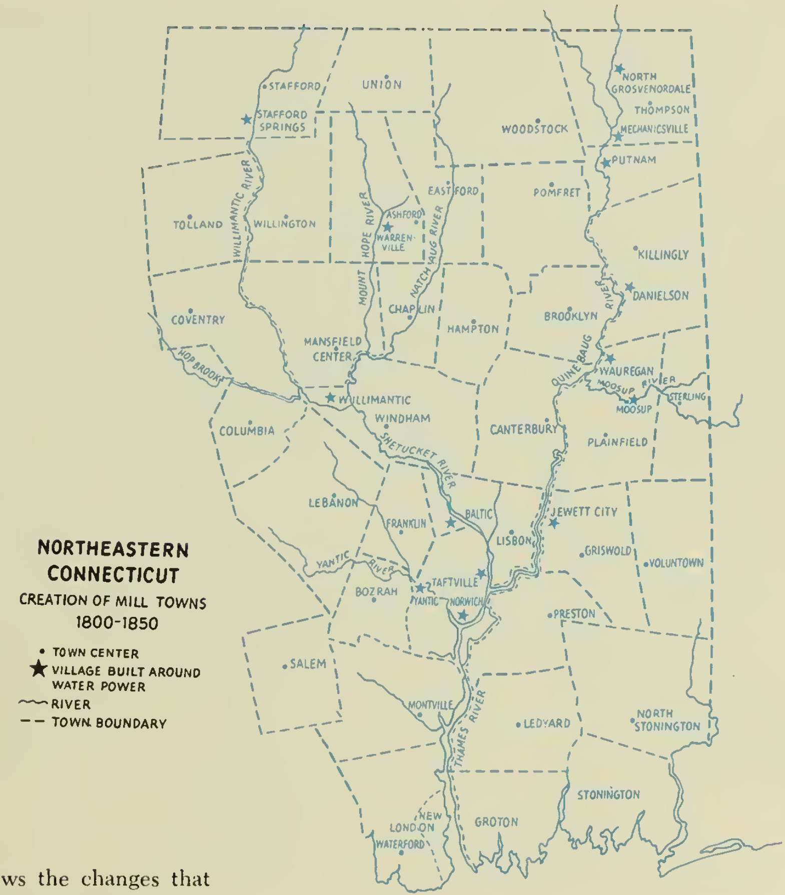
These three ideas, the factory system, interchangeable parts, and dividing a complicated job up into a number of simpler jobs, were taken up by many Connecticut men and used in manufacturing many different things.

When we put all these factors together we can see why Connecticut became a manufacturing state. In summary, these factors were: 1) a growing population needing many things that they now had money enough to buy; 2) a limited amount of good land so that many young people had to find other types of work; 3) an abundance of power coming from the rapidly flowing rivers which had many lakes that could be used for storage; 4) unused water power sites along these rivers; 5) iron ore, limestone, copper, hides, wool and other mineral or agricultural products that provided raw materials for many factories; 6) a number of new inventions, and new ways of making things profitably for the maker.

EXPANSION OF MANUFACTURING IN CONNECTICUT — 1800-1850

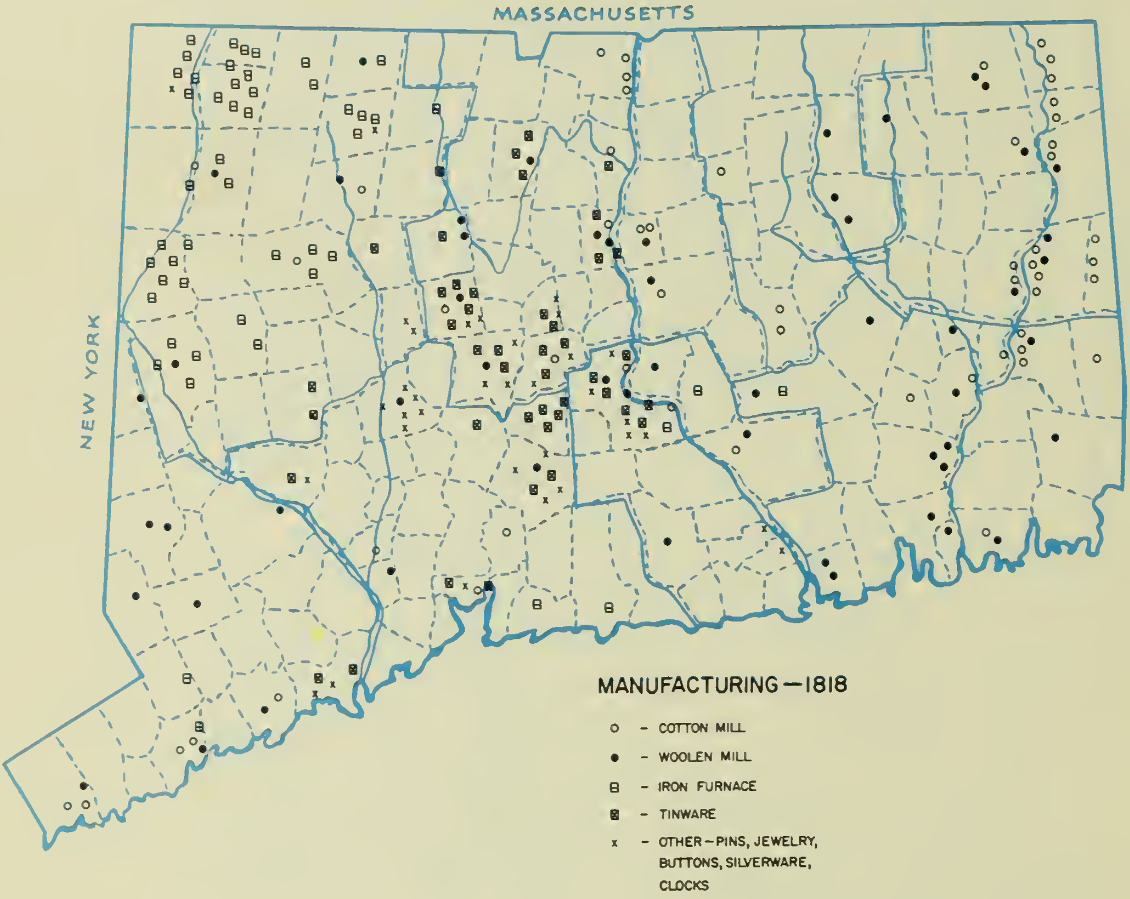
The fifty year period from 1800 to 1850 was one of very rapid change in Connecticut. People liked the new way of living, they enjoyed working in factories. The young people of farming communities back in the hills threw down their scythes and pitchforks, packed up their belongings, said goodbye to the old folks, and started off to get work in the mills. They all hoped to make their fortunes in these new industries and many of them did. Living in towns, they thought, would be more exciting than living on a farm. At least there would be more people around and more things to do. Town and city life probably always will have attractions for young people.

The towns that these young people headed for were, in many cases, brand new settlements. The original settlements of Connecticut were farming communities. The village itself was often where the town hall, the church, the general store and a few other buildings and shops had been built. Because it was planned to serve as the center of political and religious activities of a region, it was usually located near the center of the town's territory. The new villages were built around waterpower sites on the rivers that flowed through town territory. Often the river flowed along the edge of one town. Usually it was some distance away from the original village. The new



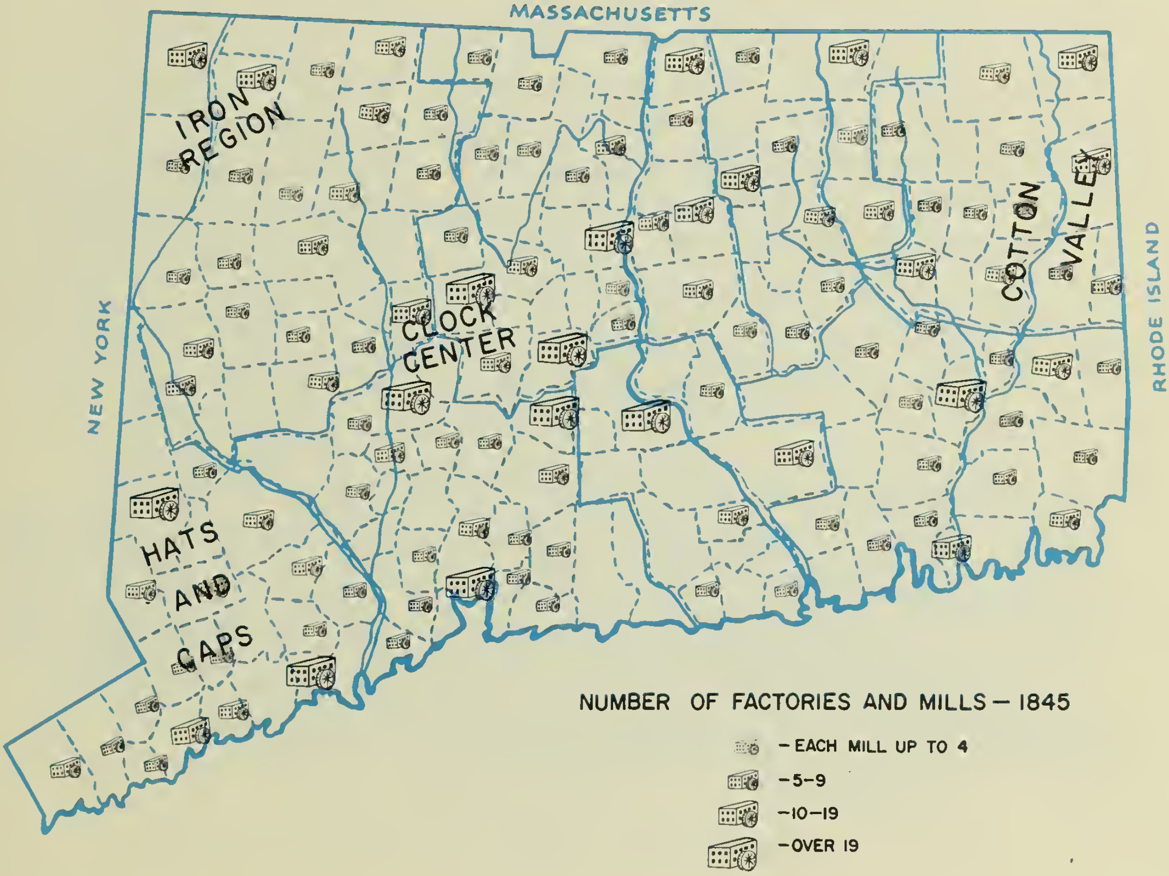
This map shows the changes that manufacturing brought to the little towns of northeastern Connecticut. The stars represent mill towns created when the waterpower on the rivers was harnessed. As the mill towns grew the old town centers declined.

village with its factories and new houses for the factory workers grew rapidly. Eventually, some of them grew into large towns or cities. The map above shows the establishment of these mill towns in one quarter of Connecticut. The original town center was usually on the upland. It remains today as a small village. Along the rivers, "mill towns" were set up and they grew much larger than the earlier settlements. There may have been similar movements of people in your own town.



In 1818 a count was made of the textile mills and some other factories; the smaller one or two man shops were omitted. Notice where the mills are concentrated. Many towns did not have any mills.

The growth of manufacturing in Connecticut may be seen best in a pair of maps. Each map is dated and shows the factories that existed in the state at that period. Several important facts are shown on these maps. The first is the rapid increase of the number of mills in the state at this time. It must have seemed to people who were living then as if everyone had the same idea of making money by building a factory, buying machinery, hiring workers, and starting out to manufacture some-



By 1845 the state presented a very different appearance. Almost every town had one or more factories. On this map also only the larger mills and factories are counted.

thing. Factories were going up on every river and even on very small brooks. Dams were built across all these rivers; canals were dug to bring the water to the mill, and water wheels were set up. It was a busy time. Between 1818, the date of our earliest map, and 1845, the second map, the number of factories increased greatly.

The second thing to notice is the way certain types of manufacturing are found primarily in certain parts of the state. The textiles are in northestern Connecticut where they first started. Other areas have cotton and woolen factories, but not as many as the Quinebaug valley. The number of iron furnaces in Litchfield County is explained by the fact that iron ore is located there. It was easier to make the ore into iron near the mines than to ship it away. After the iron was made it was shipped to factories that turned it into a lot of useful things. The brass and copper industry is mostly found in the Naugatuck River Valley, simply because it got started there. The men of the area learned how to handle these metals. If you wanted to set up a brass foundry, you went to the towns that had workers who knew how to do the work. Clock manufacture and tinware are concentrated in certain regions for the same reason.

All of the manufacturing plants that existed in Connecticut during this period are not shown on these maps. Some of them did not use very much power and did not need to locate near the rivers. These types of manufacturing were usually located in the larger towns of the state. These were, if you will remember, the seaports, New Haven, Hartford, Bridgeport, Norwich, and New London. From the ports, their products could easily be shipped out. Also, since many of the items they manufactured required a lot of hand labor, hats, shoes, and wagons, they found more workers available in the larger communities.

To summarize the industrial development of the first half of the nineteenth century in Connecticut, it rested more upon the genius of Connecticut individuals than upon the physical resources of the state. Manufacturing began, as the word means, in making things by hand to supply the needs of the people of the state. Machinery was added as ways were invented to improve on hand-made products. Where mineral resources were available they were used, and where falling water provided a power source, it was harnessed. The most important factor in the rise of manufacturing in our state was at that time, and is now, the skill of Connecticut workmen. As we trace the history of Connecticut from 1850 to 1960, we will see changes in the use of other resources, but a continued dependence on the people of the state.

The State House of 1792

TRANSPORTATION CHANGES

CHAPTER 7

TRANSPORTATION CHANGES

Nothing that you are wearing and very little that you eat is produced within walking distance of your house. Almost everything that you see around you in your home was made many miles away. Transportation systems have become a necessity to us. We also travel more than people used to do. In one day the average person today travels farther than the first settlers of Connecticut did in a month. For over one hundred and fifty years land travel was so difficult in Connecticut that most people preferred to stay at home. People were fortunate if they could go fifteen miles in a day. Today you can travel that far in a quarter of an hour on the parkways. Good roads make traveling easy for us; there were no good roads in colonial Connecticut.

We can talk about roads from two points of view: of the man who builds the road, and of the man who uses it. To build a road properly, as we do today, requires a great deal of work. The surface soil has to be scraped to one side and replaced with gravel or broken stones, then a surface of some kind is put down. In this sense there were no roads in colonial Connecticut at all.

When the people began to move away from the rivers into the hilly regions, they had to have some route to follow to get back to the rivers or to the coast. The towns marked out what they called a highway. They cut down the smaller trees and bushes, but did nothing about the larger trees, rocks, or swampy places. In traveling that road, you picked your way along, shifting from side to side to avoid obstacles. If people had traveled the road ahead of you, there might be ruts you could follow, unless they were too deep and muddy. If they were you turned aside and made a new path beside the old one. Foot travelers and people on horseback could get through. In a wagon you were fortunate to make two miles an hour and very fortunate if your wagon didn't fall apart before you reached the end of your journey. No attempt was made to bridge the smaller streams, you forded them. On the larger streams there were a few ferries or bridges.

The rutted winding cart tracks make an attractive picture but a horrible road. But, in comparison to some roads of Colonial Connecticut, this would be a paved highway.

One of the most annoying problems about traveling at this date was taking down and putting back up the bars where the road crossed some man's land. Note the expressions on the faces.

There were other inconveniences as well. People had not yet accepted the idea that a road was public property. Wherever a road crossed one man's land he could put up a gate or bars to prevent his livestock from leaving his land. Anyone traveling this road had to stop at every gate, get down, open it, lead his horses through, then close it again. On one road from Preston to Stonington the inhabitants complained that every time they used it they had to take down and replace 40-50 sets of bars. Gradually this particular nuisance was done away with, but surfaces were not improved very much for many years. You can imagine what travelers said about these roads.

It is easy enough to criticize the poor roads of this period, but you must remember that most towns had only a few hundred people in them. They had little need for good roads; there were few travelers, and few farmers produced more than they needed to eat themslves. As the farms grew more productive and the farmers harvested more food than they needed themselves, they then began to demand better roads. They knew that good roads would make it possible for them to ship their farm goods to a market. By the end of the Revolutionary War enough local people wanted better roads to encourage the state government to take action. So the state began to insist that the towns do the job they were supposed to do, of making roads. Every taxpayer in each town was given the choice of working two days a year on the roads or paying a fine. This produced a small improvement.

THE TURNPIKES

So long as roads were built and maintained by this type of labor they remained poor. None of the men working out their time on the roads were interested in working very hard. The two days of work was treated by many as a sort of holiday, a chance to get together with other men of the town, talk things over and perhaps to do a little work. They filled in the worst holes, took out a few rocks, or replaced a bridge that had been washed away in the spring flood. But they did not build roads.

The first roads were really built as the result of individual action. Some Connecticut man began to think about the problem of transporting things on the roads. He knew that people were used to paying tolls to cross rivers by ferries. His thoughts may have gone something like this, "If people want good roads, would they be willing to pay to use them? Farmers could send their corn to the seaports and sell it for much more than enough to pay the tolls and their costs of raising the corn. Lumbermen could ship their lumber by the road. Travelers could move around more easily." In his own mind the answer came out yes. He could build a good road, charge tolls for everyone who used it, pay for the road and make a profit besides. This was the beginning of the turnpike movement in Connecticut.

The first one was built between New London and Norwich in 1792. It was an immediate success. Unlike the roads of the past, this was a graded road. The low swampy spots were filled in or bridged, rocks and stumps were removed, culverts were built to carry brooks under the road, bridges were built over larger streams, and a gravel surface was laid down and

The first turnpikes were a step forward. Although they were expensive in terms of cash money, the coaches and wagons lasted longer on the smoother roads. A horseman is paying his toll.

smoothed. This is one we would recognize as a road. Traveling on such a road was a joy. The stage coaches ran so smoothly that one could actually go to sleep in the coach.

Toll gates were built every few miles and the traveler stopped to pay toll. It varied, depending on how you traveled. Stage coaches paid the most, just as buses today pay more than private cars. A private coach paid 25 cents; a man on horseback paid 4 cents. Farmers driving a herd of cows or sheep paid so much per head. Certain individuals did not have to pay tolls. Anyone using the toll road on the way to church did so free of charge. Farmers on the way to market also paid nothing, and funerals traveled free.

The first ones built were quite profitable and many other men took up the idea. Soon turnpikes crisscrossed the state in every direction. Some of the later ones were poorly planned and took in less in tolls than the turnpike had cost to build. Then the novelty of good roads wore off and people began to object to having to stop every little while to pay tolls. They tried to find ways of avoiding the toll gates by getting off the toll road before the gate and getting back on afterward. This is still done today. On many roads the profits became so small that the owners of the road stopped keeping it in repair. Then the state stepped in and took these roads away from their owners and turned them back to the towns to take care of. It only lasted a few years, but the turnpike fever gave us our first good roads.

The union between Connecticut and the other states in the United States in 1783 increased travel between the several states. People had always been able to travel from state to state by horseback or private carriage. But it was a nuisance to have to take care of your animals whenever you stopped for the night. Also, many people did not own private carriages. In 1783, the first regular line of stage coaches began to run from Boston to New York through Hartford and New Haven. On a stage coach, all a traveler had to worry about was himself.

At first the trip took a week, and the travelers stopped overnight at taverns along the way. As the roads were improved, the time was cut down. By 1800 the time was reduced to four days, and the fare was $10.00. (This doesn't sound like a very expensive trip, but remember the average workman at this period only earned $1.00 a day.) Other stage lines were set up to Albany, Providence, Springfield, Worcester and between towns and cities within the state.

The Concord coach provided faster and more comfortable travel than did the earlier coaches. Note the coachman blowing his horn to announce the arrival of the coach.

The first stages were very crude vehicles and traveling in them was not comfortable. They had no springs and the seats were simply wooden benches. As competition increased, the stage coach owners had to provide more comfortable and attractive conditions for their passengers. Cushioned seats and decorated interiors became common. The body of the coach was suspended between the axles on leather straps that reduced the jolting. Concord, New Hampshire made the most famous coaches. You are all familiar with the appearance of this type because it is the one used in western motion pictures and on television programs.

To the children of the small towns along the way, the blast of the horn, the thundering hoofs and the rumble of the wheels that marked the arrival of the daily stage was an exciting event. They came running from all sides to watch the passengers get down at the tavern. The skill of the drivers was greatly admired. Some of them became famous characters, as much looked up to as sports stars are today.

When the railroads came to Connecticut they replaced the stage coaches on the main routes of the state. Many, however, survived and were used in remote parts of Connecticut until the automobile took over at the end of the nineteenth century.

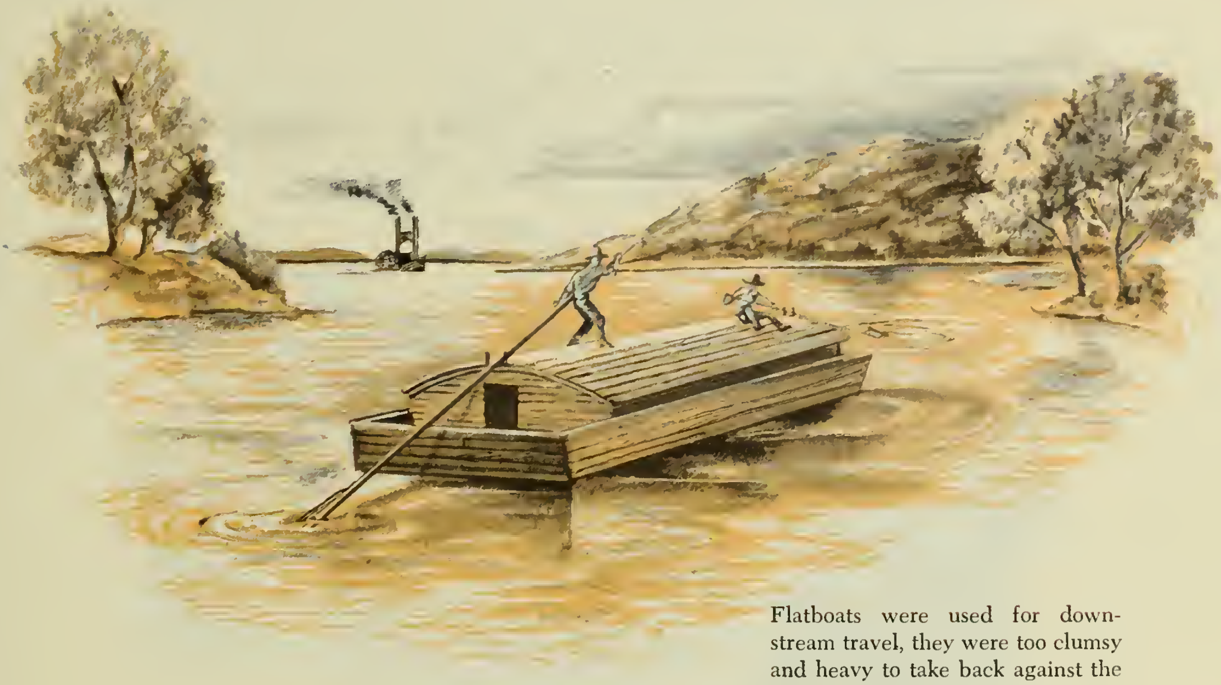
CANALS

Stage coaches served the needs of passengers, but for the shipment of freight another transportation system was needed. Carrying heavy loads of iron, lumber, or even farm products was very expensive on land. Water transportation was much cheaper. In the colonial period the rivers furnished the only convenient way of shipping freight, and all of the larger rivers of the state were used to some extent. With the exception of the Connecticut, most were not usable by large boats. The same feature that made the Quinebaug, Willimantic, and Naugatuck rivers valuable for waterpower, the waterfalls and rapids, made them useless for transportation.

Several different types of boats were built. Besides the sailing vessels that could travel on the ocean, there were some river boats. The most useful was the pole boat. It was made of pine planks and was 20-30 feet long and 3-5 feet wide. Since it had a flat bottom, even when it was loaded, it would float in as little as one foot of water. It was pointed on both ends and could float down stream with the current or be poled back upstream. On each side of the boat ran a narrow plank along which the polemen walked when they were pushing it upstream.

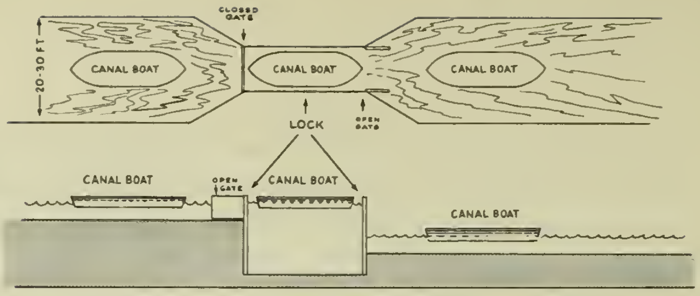
Poling a boat upstream was very hard work, but even so it was easier and cheaper than moving the same amount of freight on land.

A clumsier type was the flatboat. This was an almost oblong box, much larger in size and could carry heavier loads. It could not be taken back upstream after it came down with a load of produce. Usually the crew sold it and then they walked back home along the river road. There was an in-between type, the barge, larger than the pole boat and narrower and better shaped than the flatboat, that had a sail and could be sailed upstream as long as it did not have to pass over any rapids. Some of these barges were as much as 70 feet long and could carry up to 30 tons.



Flatboats were used for downstream travel, they were too clumsy and heavy to take back against the current unless they were towed upstream by a steamer.

These two diagrams show how a lock was built in the canal and how it operated. In the lower diagram the upstream gate has been opened and the boat is free to continue on the higher level of the canal.



Since water transportation was so convenient attempts were made to extend it beyond the rivers. The method used was the canal. This was a ditch, 20-30 feet wide and 4-5 feet deep, dug on level ground. Where the ground rose, the canal was dug on a series of levels that were connected by locks. The lock was a long box of wood or stone about 12 feet wide placed in the canal. Both ends could be opened or closed. To use the lock you pushed your boat into the lock, then closed the end behind you. After it was closed you opened the other end. If you were traveling uphill, the water from the canal level above you flowed into the lock, lifting your boat up to that level. Then you simply pushed your boat out onto this new level of the canal and continued on your way. Going down, the water in the lock flowed out into the canal in front of you, lowering your boat as it went.

A scene along the Farmington canal about 1840. The boat in the rear, drawn by one horse, must have been loaded with light cargo.

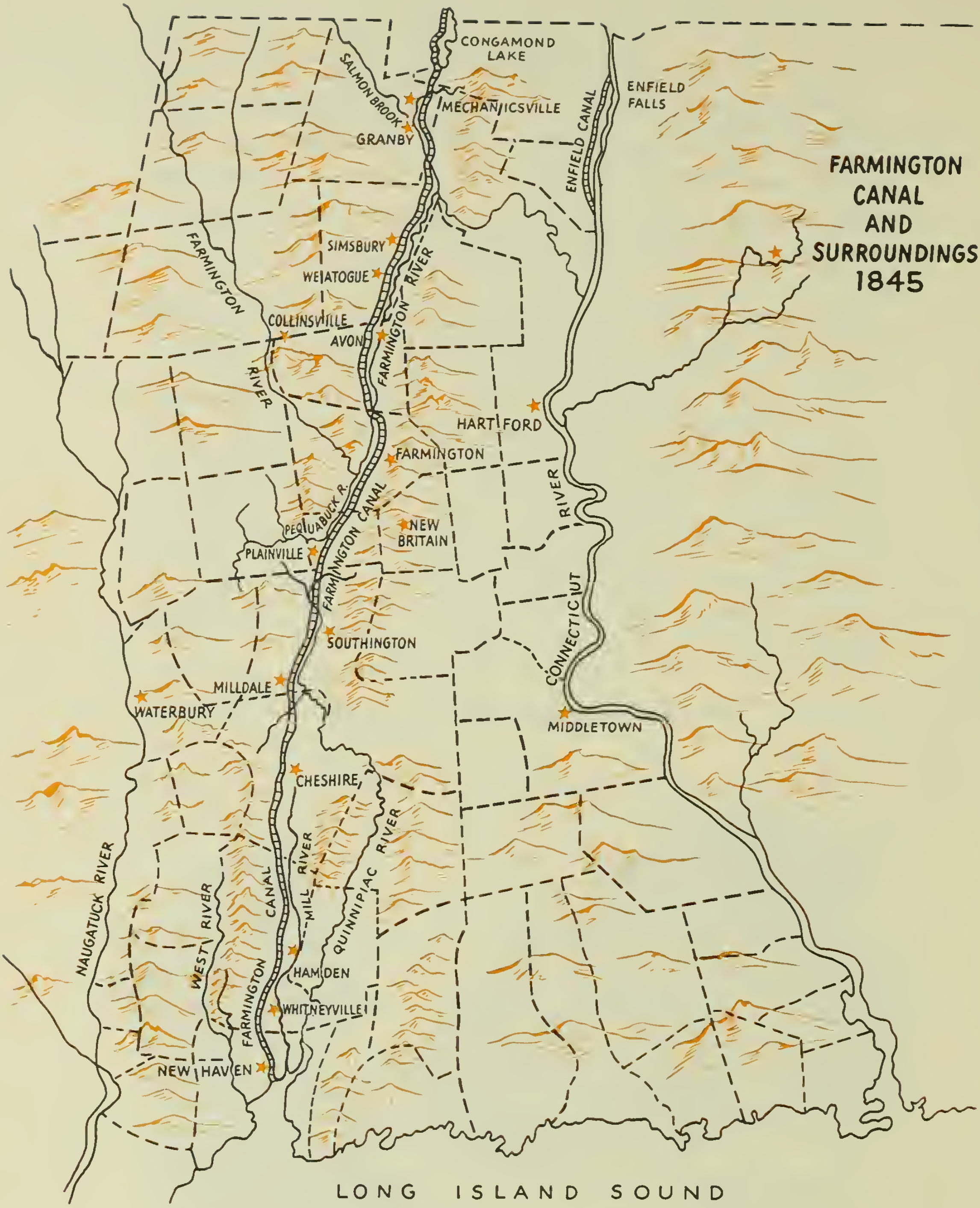
There were two types of canals built in the United States. One was the canal built around falls or rapids in the river. It was usually just a series of locks with short distances in between them. The other was built across country to extend water transportation into regions where there were no rivers. At least there were no rivers running in the direction you wanted to go. We had one of each type in Connecticut.

The canal at Windsor Locks, on the Connecticut River, was opened in 1829. It was three miles long and had 8 locks. By using the canal, boatmen were able to get around Enfield Falls. In the early days it was probably used by the boats that were going up stream. Many of the boats and rafts coming down in the spring and early summer when water was high in the river would run the falls to avoid paying toll. Running the falls made for a more exciting trip, that is, if you made it. This canal exists today and can be seen as you travel along Route 5A through Windsor Locks. It is worth a visit.

THE FARMINGTON CANAL

The Farmington Canal represents the other type. It provided the upper Quinnipiac Valley and the upper Farmington with cheap water transportation. This was not, however, the reason for its construction. New Haven business men, jealous of the Connecticut River traffic which made Hartford into an important seaport at this period, decided to tap the Connecticut River above Hartford at Northampton, Massachusetts. They planned to divert the boats coming down the Connecticut River via the Farmington Canal to New Haven. This would give them the river freight business rather than Hartford.

Digging began on July 4, 1825 and continued slowly because it all had to be done by hand. Many of the newly arriving immigrants found work on the canal. The route of the canal was selected to fit in with the landforms. It followed the Mill River Valley to Cheshire, and then cut across to the upper Quinnipiac River, which it followed to Plainville. Here it entered the



This map shows the country through which the Farmington canal ran. The stars indicate towns, in some cases little mill towns that sprang up along the canal to take advantage of it for transportation. See the text for a description of the canal route.

Pequabuck Valley which is tributary to the Farmington. Continuing north the canal went up the east side of the Farmington River, which it crossed on an aqueduct on the town line between Farmington and Avon. At Tariffville it left the Farmington Valley, heading north up Salmon Brook and then into Lake Congamond on the Massachusetts line. In Massachusetts it angled northeastward, striking the Connecticut at Northampton. Traces of the canal can be seen at various points along this route today.

By November 1828, the canal had been completed from New Haven to Farmington, and a year later to the Massachusetts line. Farmers and manufacturers along the way immediately began to use it. Cargoes of farm products and manufactured goods came down the canal and raw materials went up. The Massachusetts portion was not completed until 1835.

Anyone could use the canal by paying tolls, and hundreds of boats were built and launched all along the canal. All you needed was the lumber and a team of horses to go into business for yourself. The farms and factories along the way furnished the freight and were glad to get someone to move it for them. Most of the boats were small, carrying about 20-25 tons. (This is about the capacity of a freight car today.) They were long and narrow because they had to fit into the locks. To run a canal boat you needed two men, or boys. One drove the team

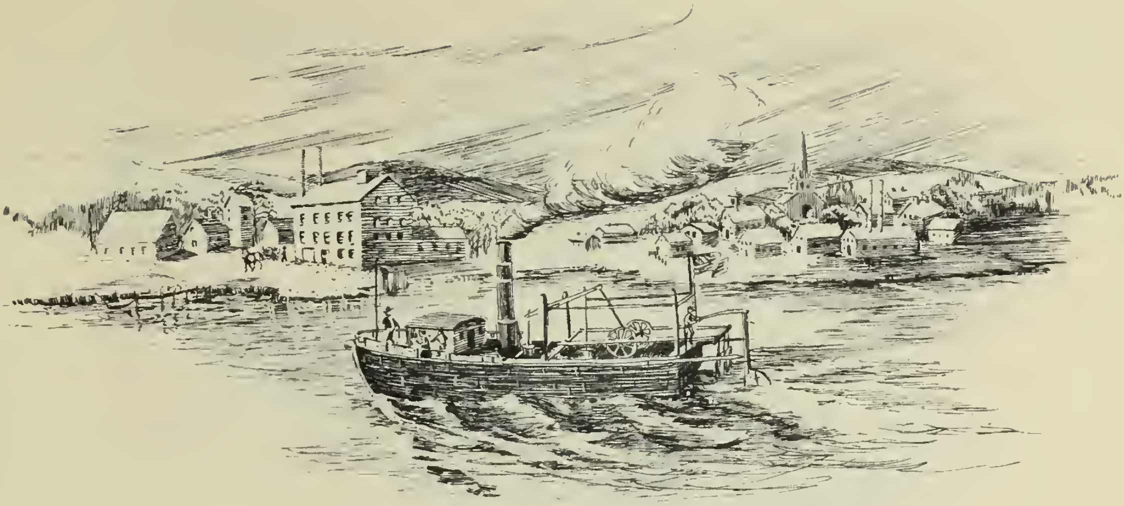
This proud young man has begun his career on the canal as a driver boy. In his own mind he is already captain of the boat.

of horses that walked the tow path pulling the boat, the other steered the boat. It was a pleasant life. The boat moved very slowly, about 2-3 miles per hour and usually tied up at night along the bank. Sixty locks in Connecticut raised or lowered the boats some 530 feet. To cross our state took about three days of travel.

Although the canal was well used it was not profitable. Even the tonnage shipped in 1844, 15,000 tons carried up the canal and 9,000 tons coming down, didn't produce enough in tolls to pay a dividend. Four years after the canal was finished the railroad was completed from New Haven to Hartford providing competition. The canal had been built too late. Besides, the canal had a series of misfortunes: floods washed out the banks, and droughts dried up its sources of water. The sandy soil of the canal route, which made it easy to construct, permitted the water to seep away into the ground. It was finally closed in 1847 and a railroad built on the tow path along the canal as far north as Southington. This is known as the Canal Road today.

STEAMBOATS

Robert Fulton did not invent the steamboat. The first working steamboat in America was the invention of a Connecticut man, John Fitch. Born in Windsor, he moved to Philadelphia where he developed the idea of using steam to push a boat. He had a hard time finding anyone to help pay the cost of building such a boat. Friends finally put up the money and he built three boats, each better than the one before. The third one ran regularly from Philadelphia to Trenton, New Jersey, on the Delaware River during the summer and fall of 1790. Other men improved on Fitch's ideas. Two of these also were Connecticut men, Elijah Ormsbee and Samuel Morey. The latter built and ran the first steamboat in Connecticut. His paddlewheel steamboat ran on one occasion from Hartford to New York and back to Greenwich.



John Fitch's first successful steam boat. Note how the paddles work. Later these paddles were attached to a wheel.

Robert Fulton's contribution to the steamboat, besides certain improvements in design, was that his steamboats were business successes. This gave the public confidence in steamboating. Within a few years after Fulton's "Clermont" made its trip from New York to Albany, there were steamboats on many rivers. The first regularly scheduled trips to Connecticut came in 1815. This first boat was the "Fulton." Two round trips were made each week between New York, New Haven, and New London. Since we did not have navigable rivers other than the lower portions of the Housatonic to Derby, Thames to Norwich, and the Connecticut, steamboat travel in Connecticut was most important on Long Island Sound. The several steamboat lines that were set up in the state provided for passenger and freight service between the Connecticut ports and New York. When the railroads came in, the steamboat companies changed their schedules of sailings so that the trains from Massachusetts were met by steamboats at the Connecticut ports and passengers were taken on to New York by water.

One of the early Connecticut river steamboats is shown in this drawing. The paddle wheels were sometimes on the sides of the boat, and sometimes at the rear.

STEAMBOATS ON THE CONNECTICUT

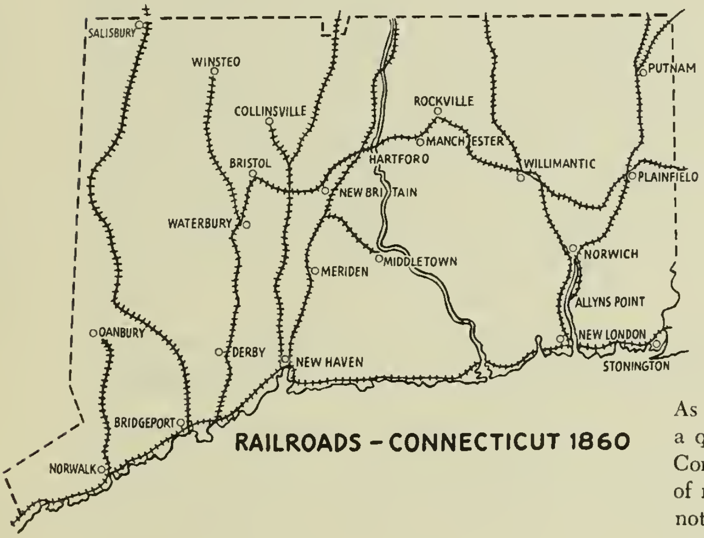
Hundreds of men were working on the Connecticut River in 1826, sailing or poling their flatboats upstream and floating them down, when the first small steamboat was built for upstream travel. Named the "Barnet" for the town in Vermont which its owners hoped to reach, it was built to travel in shallow water. It drew only two feet and later boats could float in even less water. Some people claimed they could run on a heavy dew. They were built to carry passengers and also to pull the flatboats upstream.

Although several were built and some made at least one trip far upstream, they were not successful. The "Barnet" had to call upon the assistance of the flatboat men to pole it up over Enfield Rapids. It didn't have enough power to run them. Charles Dickens, who traveled on one of these river steamboats, wrote, "it had one-half a pony power." Later boats had more power but there wasn't enough passenger business for them. Some were used for a few years to pull flatboats up and down stream until the railroads came in.

Between Springfield and Hartford the larger number of passengers kept a steamboat line running until 1844, when the railroad was completed. After that year, steamboat travel on the Connecticut was limited to the river below Hartford. Larger and better boats kept the passengers happy and the line from Hartford to New York continued operation until 1931.

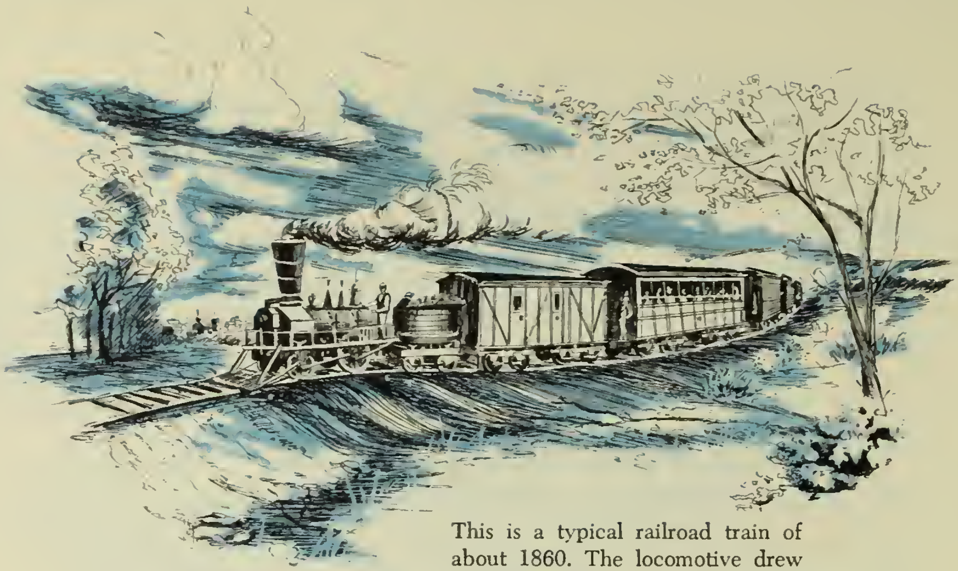
RAILROADS

Railroads are more closely tied to the landforms of a region than any other kind of transportation. The locomotive that looks so powerful when you see it, has to have a carefully prepared roadway before it can operate. It can't climb steep slopes at all. Its track is usually limited to valleys or level uplands. A map of the present Connecticut railroads can almost be substituted for a map of the major rivers.



As early as 1860 Connecticut had a quite complete railroad network. Compare this map with the map of rivers inside the front cover and note how important the valleys were in determining the location of the railroads.

Railroads are also closely tied to cities, which produce freight and passengers for the railroads. The manufacturing plants of a city use raw materials which the railroad brings to them, and they produce manufactured goods which the railroad takes away. The people who work in the factories eat food that has to be brought in by the railroad. A map of Connecticut's cities will show the points that the railroad builders tried to link together by rail.



This is a typical railroad train of about 1860. The locomotive drew both freight and passenger cars at the same time.

The railroad has two great advantages over the canal: it carries its load at a faster rate of speed and it doesn't have to stop in the winter. The canals freeze up but, except in the heaviest snow-storms, the railroad can keep running. We always think of railroads as using steam power from the beginning, but the original builders thought of it as a road made of rails, and were willing to use other forms of power; horses, for example. The idea of using steam came soon after. The first Connecticut railroads, however, were steam railroads.

If you put together several facts, the building of the Connecticut railroad system becomes quite clear and understandable. The facts are: 1) railroads need nearly level land for their roadbeds; 2) they need to link together cities that produce business for them; 3) many of the raw materials that were used in Connecticut were shipped out by sea; 4) one of the major sources of freight and passengers was New York City. Both arrived in Connecticut by way of steamboats that sailed from New York to all the main Connecticut seaports; 5) many passengers arriving this way were headed for Boston. Railroads already existed in Massachusetts that ran along the northern boundary of Connecticut and down to Providence, R.I.

With these facts in mind, it is understandable that the first railroad built entirely in Connecticut was from New Haven,

How different is this 19th century passenger car from our present day cars.

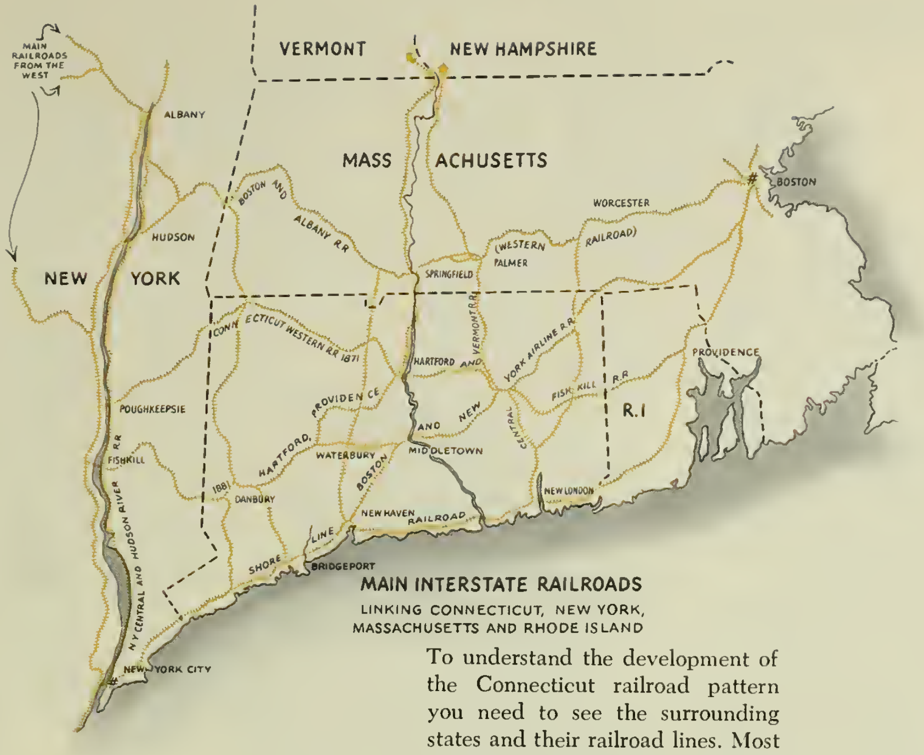
going north. The rails reached Meriden in 1838, Hartford in 1839, and Springfield, Massachusetts in 1844. The second ran from Norwich north to Worcester, Massachusetts, and was opened in 1840. Bridgeport built the third railroad north to New Milford in 1840. It reached the Massachusetts Western Railroad in West Stockbridge in 1842. New London didn't have a railroad until 1849, when they completed one as far as Willimantic. The following year they continued the rails north, up the Willimantic River, to reach the Massachusetts railroad at Putnam. The same year that construction started on the New London road, New Haven men began building a second road north following the old canal towpath. This road reached the Farmington River in 1848 and then followed the general route of the old canal north, reaching the Connecticut River at Northampton, Mass. in 1855. At the same time that this road was being built the people in the Naugatuck Valley built a railroad that ran from Milford north to Winsted. The largest town not on a railroad in 1849 was Middletown, and the people there built a branch line to join the Hartford-New Haven railroad in 1850. By 1850, the only important river valley that did not have a railroad was the lower Connecticut River. As you will remember, this portion was navigable by steamboat and did not need the railroad as badly as did other valleys and regions.

One of the main sources of traffic for the steamboats and stage coaches had been passengers traveling from New York to Boston. After the valley railroads were completed, the passengers changed from steamboat to railroad at the seaports. This change was inconvenient and in 1848 the Shoreline Railroad was built from New York as far as New Haven. Construction continued eastward along the shore, reaching the railroad that had been built from Rhode Island to Stonington in 1837. The Shoreline route made it possible to travel all the way from Boston to New York by rail. From the point of view of time, the first rails on Connecticut soil had been laid in Stonington.

The Norwalk-Danbury line opened in 1852 and Bristol was linked to the Naugatuck line in 1855. Other growing manufacturing towns were also being linked to the main railroads during this period: New Britain to both Hartford-New Haven and Canal lines in 1850, Vernon and Manchester to both the Hartford-New Haven and the New London-Putnam lines in 1849, Collinsville to the Canal line in 1850. By 1860 almost every manufacturing town of any size was on a railroad.

With only two exceptions, these railroads extended into Connecticut from the Sound as your fingers extend out from the palm of your hand. If you wanted to go from Salisbury in the northwest corner to Hartford by rail, you had to come south to the coast and along it to the railroad that went north to Hartford. The only east-west lines were: 1) the Shoreline and 2) a cross link from Waterbury via New Britain, Hartford, Manchester and Willimantic to Plainfield. People in Hartford who wanted to use the iron from Salisbury argued that a direct line "across country" would save so much in freight charges that the savings would pay the cost of the railroad. One was built in 1871. Cross links between other towns in the interior of Connecticut were also built before 1900.

The story of transportation changes in Connecticut shows the importance of people and factories in determining where the canals and railroads were to be built. There is an even closer connection between transportation facilities (roads, canals, and railroads), and factory and farm changes. Where the factories



MAIN INTERSTATE RAILROADS
LINKING CONNECTICUT, NEW YORK,
MASSACHUSETTS AND RHODE ISLAND

To understand the development of the Connecticut railroad pattern you need to see the surrounding states and their railroad lines. Most Connecticut railroads were planned to connect up the Massachusetts and New York railroads. Not all the Connecticut railroads are shown here.

already existed in a town, the railroad or canal helped them to grow by making it easy for them to ship and sell their products. Also, along the railroad in towns or along river banks where water power was available, the presence of the railroad encouraged the building of new factories. You can imagine as one of the results of building the railroads, the later construction of factories all along the railroad, like beads on a string.

The railroads had a similar effect on farming. Farmers were able to ship their products more cheaply and conveniently by rail than they had been able to do by horse and wagon. Thus the farmers near the railroads became more prosperous and widened their farm clearings, growing more and more crops. By bringing more Connecticut products to the seaports the railroads also helped these cities. Finally, the construction of railroads gave work to many of the new immigrants who were now coming into Connecticut. The story of these newcomers will be told in the next chapter.

PEOPLE AND CITIES IN CONNECTICUT

CHAPTER 8

PEOPLE AND CITIES IN CONNECTICUT

With the exception of 30 Indians, all the rest of the people in Connecticut today are immigrants or the descendants of immigrants. Some of our ancestors came over in 1633 and some came only a few years ago. They came from any one of two dozen European countries; some came from Africa and some from Asia. While most of the people who made the trip did so voluntarily, a few did not. A small number were exiled from their homelands in Europe. They might even have been in prison and sent here to work as servants. Most of the Africans were brought here as slaves. Today, descendants of all these people have blended together as the American population.

Some have arrived so recently that they still think of themselves as transplanted. They are often called Italian-Americans or Puerto Rican-Americans or some similar name that shows where they came from. A few can be distinguished from the rest of the Connecticut people because of the color of their skins, the shape of their eyes, or the way they talk. But these, too, are Americans; citizens of Connecticut with equal rights to all the rest.

Europe, Africa, and Asia have all sent immigrants to Connecticut. These three boys stand for the three races that today make up our people.

Every group of people that came to Connecticut brought something to our state. Their strong bodies have helped to build our roads, canals, railroads and buildings. Their skillful hands have raised the agricultural goods we have shipped abroad or eaten ourselves. They have made the guns, the clocks, the cotton and woolen cloth, and the other manufactured goods we have sold. Their skills in cooking have given us new foods. Their ability in art, music, and literature have enriched our culture. Mingling with each of the other groups, their blood has produced the population of today. No one group can claim to have done it all. The older groups, those who came first, may claim that they have worked here longer than the others. In some cases the contribution of one individual, who might have come last year, may outweigh the contribution of a family that has lived here for 325 years.

In addition to our being proud of being Americans, we are proud of our particular groups and interested in how they came to Connecticut. Although we know a lot about the first people who came to our state, our records of the later arrivals are less complete. Immigration into Connecticut has gone on steadily since the first ships arrived here directly from England. Every year since then, individuals and families have gotten off boats

An artist's sketch of a newly arriving immigrant family, perhaps on the dock in New Haven. Their expressions show their mixed feelings as this long-hoped-for goal is reached.

in New Haven or New London harbors and have looked around with curious eyes to see what their new homes were like. In comparing the groups that have come, one could have seen some differences in clothing, luggage, or in the type of ships they came in. Listening to them, one could have heard many different languages. The similarities would have been equally noticeable if one looked more closely. They would have shown an equal determination to succeed, to make a better life for themselves and their children.

Each of the nationalities and religions of Europe can point to individuals who were in America at a very early date. The first man to land from Columbus's ship was a Jew and Columbus himself was an Italian. One of the soldiers in the Pequot War was Irish and Paul Revere was French. Most of the early settlers of the United States, however, were English. The population of Connecticut remained mainly English until long after the Revolutionary War. Although other colonies were receiving new immigrants from northern Ireland or Germany, Connecticut got very few. The reason was that our state was full of people, and Connecticut young men and women were themselves migrating west because of the lack of opportunity here. Besides the English, there were about 1,000 Indians and over 5,000

An Irish girl.

negroes. Most of the latter were still slaves. There were also a few families from other nationalities.

When Connecticut began to develop as a manufacturing state it began to attract some of the new immigrants coming from Europe. There soon were jobs for them in the factories or in building our railroads. Most of these new-comers arrived in the United States by way of Boston or New York. From those cities they spread out, looking for work. Some arrived in Connecticut by ship in our seaport towns; others came overland by stage coach or by the railroad. They swarmed into our cities because the factories were there, and this is where the men who were building the railroads came to hire workers.

The new immigration that began to flood into the United States after 1840 came as waves do onto a shore when the tide is coming in. Each successive wave is a little larger and advances further up the beach. The waves of immigrants that came into Connecticut were small at first and primarily filled the seaport towns. Later waves were larger and spread over most of the state. The high point was reached just before the First World War. Since then immigration has continued; but the waves are like the ebbing tide, each one is smaller than the previous one.

At different periods of our history the immigrants have come from different European countries. The first wave came from Ireland after 1845. In that year a potato famine in Ireland gave many the choice of leaving for America or starving. For the next fifteen years an annual total of perhaps 3,000 to 4,000 Irish men, women, and children came in every year. This wave gradually died down. Then, after the Civil War, a second wave began. This time the people came from Sweden, Norway, Germany and the French part of Canada, as well as from Ireland. Most of these people divided themselves up among the cities, but the French Canadians went mostly to the textile towns of the upper Quinebaug Valley.

A Russian man.

An Italian girl.

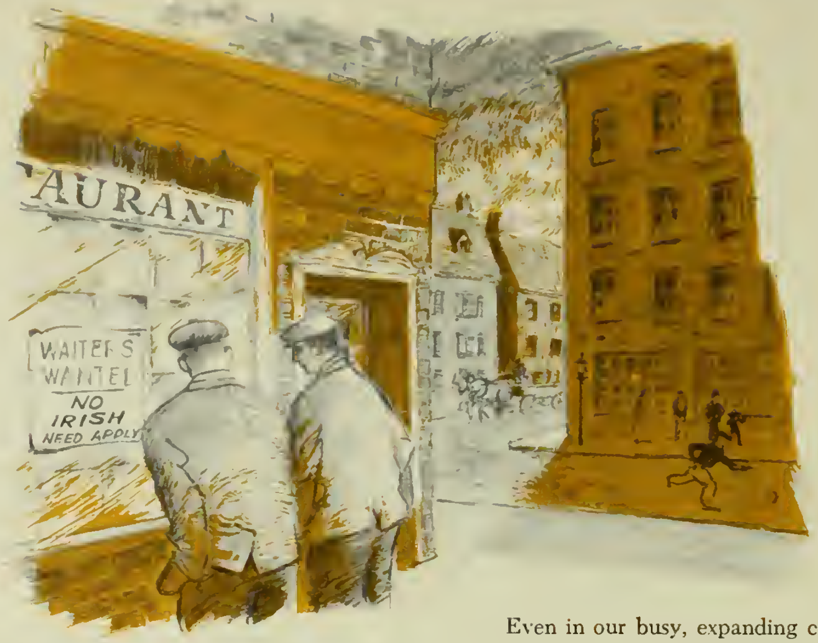
The third wave started after 1880 and came from entirely new parts of Europe; the Mediterranean region and Eastern Europe. For our state, the most important countries were Italy, Austria-Hungary, and Russia. The latter two countries controlled Poland and Czechoslovakia at this time. Many of the people who were listed as coming from Austria-Hungary or Russia were Poles, Czechs, or Jews. This wave hit its high point between 1900 and 1910, when we received about 10,000 new people every year. By 1915, almost one-third of the population of Connecticut had been born in Europe.

All of these people came for much the same reasons. In their homelands there had been little hope of better things. America offered, above everything else, hope. If they had been poor at home they could hope for better wages, or in America they could hope to own land of their own. If their religion had been ill treated in Europe, they could hope for freedom to worship as they wanted to here. If they had been ruled badly, they could hope in America to rule themselves.

The Irish and most of the later immigrants arrived with a handicap. They did not speak or understand English. It was not easy for them to find jobs. Most of the men had to take the hardest and dirtiest jobs, the ones that other people did not want. These jobs paid very little money, so the newly arrived immigrant had to live in the cheapest houses and eat the cheapest foods. Nor were they able to afford fine clothes. Some of the men were saving money to pay the cost of a passage over for their wives and children whom they temporarily had left behind in Europe. This meant that they had even less to spend on themselves.

People already living in Connecticut did not welcome these newcomers. The immigrants were looked down on because they didn't speak English, had strange looking clothes, and crowded together in the poor sections of the cities. The first waves of

An Austrian man.



Even in our busy, expanding cities work was often hard to find. The immigrants found that Connecticut people did not always welcome them with open arms.

Irish often found signs put up in the store and factory windows, "No Irish need apply." This made things even more difficult for them. One of the things that the Connecticut residents objected to was that the Irish had a different religion. They were Catholics. Although there were some Catholics already in Connecticut, there were only a few. Most of the people were Protestants. Since they didn't know very much about the Catholic religion they were suspicious of it.

The children of the newly arrived immigrants, particularly if they were born in this country, had a little easier time. They learned the English language and American ways in their schools and from their friends. They were native born Americans and you couldn't tell them from other children. The only difference was that their families at home spoke another language than English. This was really an advantage because many of the children of the immigrants grew up speaking two languages. This is much better than speaking only one. We show we realize this because all of our high schools and colleges offer courses in other languages.

It takes courage and energy for a man to take his family away from his home village and move them to a foreign country.

Many of the people were very homesick, and some went back because they couldn't stand the hard conditions of living and working here. The ones who stayed were the tougher ones, those who were determined not to give up. They were willing to work a little harder to give their children a better chance than they had had, and to give them an education. As a result, after these newcomers had been in this country for a few years, some of them rose from the lowest paid jobs to ones that required more ability and which paid better. They moved their families into better homes and bought better clothing and food. They proved that they had been correct in their belief that America offered more opportunity. It did, and they took advantage of the opportunities that came to them.

Their children got high school or even college educations, and they, too, often became successful. Today you will find people from the immigrant groups in the highest paid jobs, in the most highly respected professions, and in the most important positions. This was the road that each immigrant group could follow.

But once they became adjusted to America, they found that the words, "land of opportunity" meant just what they said. An immigrant family congratulate their son on his graduation from college.

It was a hard road at first, not one for weaklings. The opportunities were there, however, and those who were willing to work hard often succeeded.

Our last two immigrating groups, the negroes and the Puerto Ricans, faced particular troubles, but the negroes have certain advantages. There have always been some negro families here as long as the white settlers. Since the Second World War hundreds of other negroes have moved from the south into Connecticut. Their advantage is that they are already Americans and speak English. Their handicap lies in the fact that they have darker skins. Many white Americans still do not live up to the American belief that "all men are created equal," and some do not yet consider or treat the negroes as equals. The Puerto Ricans are also Americans. Their handicap is that most of them have learned to speak only Spanish and have had difficulty in adopting English as their new native tongue.

CONNECTICUT CITIES

Every seed does not grow into a plant, nor does every settlement develop into a city. Seeds need the right kind of conditions; good soil, enough water and sunlight before they can grow. Settlements have similar problems. Under the right conditions they will grow to village size, then to towns, and, if everything is just right, they may develop into cities. It isn't a question of soil, sunlight, and water in the case of settlements, but it is a combination of other things. Among these are the location in respect to other communities and transportation facilities such as railroads or harbors. A power source is a good asset for a city, so is a mineral deposit. There are also other reasons why cities grow. Hartford has been the sole capital of the state since 1875. (Before that date the General Assembly met alternately at Hartford and New Haven.) People who want to do business with the state government often move to the capital to live. Yale University has drawn many people to New Haven and has been partly responsible for the growth of this city.

A sleepy little Connecticut village which has the potential for a manufacturing development.

There are 169 towns in our state that today range in size from 383 to over 162,000 people. All of them started very small and grew. Some have become large cities today. One of the more interesting problems in our history is why some towns grew and some didn't. In fact, some of these towns today have fewer people in them than they had in 1800.

Most of the towns at the beginning of the 19th century were farming towns, although there were a few fishing villages along the Sound and mining settlements in the northwest corner of the state. Every town had at least one small river running through it and men were beginning to build factories on the water power sites in their towns. By the middle of the 19th

The same town twenty years later as it begins an industrial and urban development. Water power and rail transportation have produced the change.

century every town had at least one factory within its borders. Each town had dreams of growing into a large city. Its citizens had visions of busy factories lining their rivers, of hundreds of workers making things that would go out to the world and bring money back to the town. They could picture stores crowded with shoppers and new houses and buildings going up all over the town. Some of the dreamers could probably imagine large bronze statues of themselves in the town square with inscriptions that read, "to .... for his tireless devotion in the building of our community."

For most of the towns, this vision never developed. The town's landforms might have been good for agriculture, but most streams were too small to run large factories. The railroad never came to some of the towns on the uplands and, if the rails passed the town by, the factories in those towns found it hard to compete with factories that were on the railroad. Along the coast not every town had a good harbor. Often it was too shallow to permit large ships to come in. They could not use water transportation as easily as could towns that were on the better harbors. In such towns as these the little factories never grew very large. Many closed down after a few years of operation and were moved to towns that had better resources for manufacturing. People followed the factories, and the once hopeful community settled down to being an agricultural or fishing or mining town. It shipped its products to the larger cities and bought what it needed from them.

Cities need something more than agricultural resources to attract and support the large numbers of people that live in them. Usually the main economy of a city is manufacturing. The factories make goods that are shipped to far away customers. The money received for these goods is used to pay the wages of the workers. Then the workers in turn use their wages to purchase food, clothing and other supplies or services. This supports stores, repair shops, and professional people like doctors and others. Clearly, the more factories there are in a community, the more factory workers there will be and the more

This seacoast town has the advantage of a good harbor. It might be Bridgeport. The scene shows details of activity along one of the wharves.

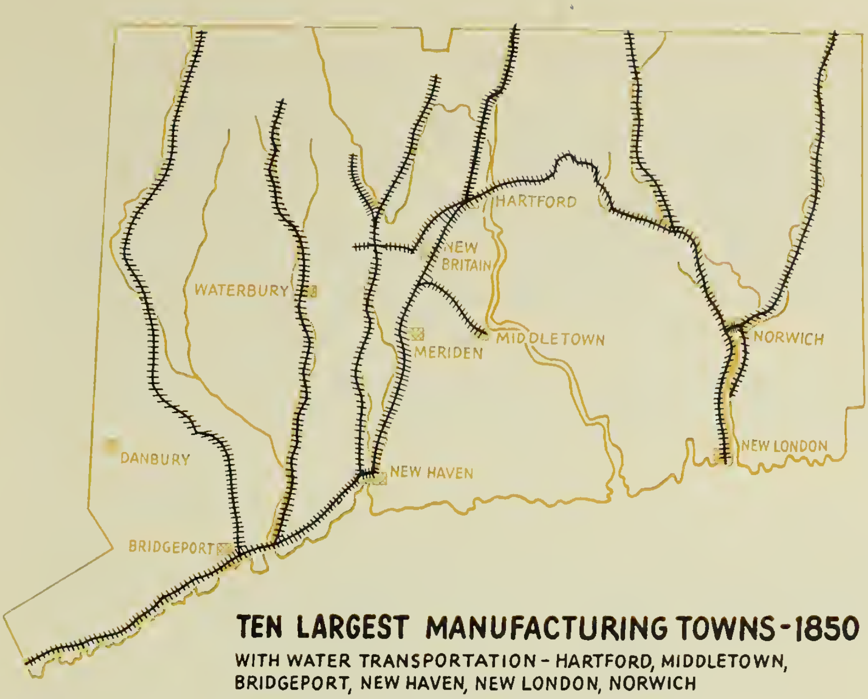
stores and other people who supply the workers with goods and services.

Another thing that can aid in the growth of a city is its location on a good harbor. The ships coming into the harbor to load and unload cargo need many workers on shore to take care of them. Men are needed to do the work of loading and unloading. Ships need repairs and equipment, much of which is made in the seaport town. Such items as rope, sails, lifeboats, and other things that go on a ship are made. Also, the seaport is often a home to the families of the sailors who run the ships. In the middle of the 19th century, New London had more than 2,000 men working on her whaling ships. Many of them had families living in the city.

Connecticut's manufacturing began with waterpower. Those cities that were located on the larger waterpower sites were able to grow in size. Among the cities that grew from manufacturing using waterpower were Norwich, Waterbury, Naugatuck, Rockville, Ansonia, Derby, Willimantic, Putnam, Winsted, and Torrington. They vary in size today. Waterbury is a large city, Norwich and Torrington are medium sized, and the others are small cities.

Some types of manufacturing did not need large amounts of power at first. They depended upon the skill of their workers. Hatmaking in Danbury and Norwalk, clock making in Bristol and Plymouth, tinware and silverware in Meriden were examples. These items were usually made by hand in small shops. As the years went by more and more people became skilled in this work. The towns became famous for their products. If a man wanted to begin the manufacture of one of these items, he would move to the town where he would find many workers who had the skills he needed in his factory. Perhaps one of the most important factors in the growth of an industry, and of the city dependent on that industry, was the ability of the owners. If they were good business men they would be able to run their factories profitably and to keep them running and expanding. They would bring in new ideas that might grow into new industries. Eli Whitney was such a man, and so were Elihu Root and the Collins brothers. There were many others. If the owner was a poor business man, the factory would not be successful and it would close down. The workers would lose their jobs and would often be forced to move away to another city.

Good transportation facilities were necessary for all manufacturing plants in Connecticut. Before the use of steam power, everything had to be moved by horses or by sail on the waters of the state. After the railroads came in it was important for a factory to be located on the railroad. The factory owners in each of the various towns were active in getting a railroad built through their towns. Most of the larger towns were on some railroad before the end of the 19th century. Railroads and factories were closely connected. Each needed the other. Railroads sought factories to provide them with freight, and factories tried to get a railroad to enable them to ship their goods out more cheaply.



TEN LARGEST MANUFACTURING TOWNS-1850

WITH WATER TRANSPORTATION - HARTFORD, MIDDLETOWN, BRIDGEPORT, NEW HAVEN, NEW LONDON, NORWICH

WITH RAILROAD - ALL BUT DANBURY

WITH WATER POWER - ALL BUT NORWICH (BEST AT WATERBURY)

RAILROADS IN 1850

Although every town in the middle of the century had at least one factory, even at this date the towns with the greater advantages, better waterpower, a rail line, or a good harbor were pushing ahead of the others. In 1845, one third of all manufacturing was concentrated in 10 of the largest towns that had one quarter of the people of the state. They are shown on the above map, which also indicates some of their special advantages; a railroad, river transportation or a harbor.

By 1900, these advantages had become even more important factors in the development of industry and in the growth of these 10 communities. They now had two-thirds of all manufacturing in the state and half of the people. These manufacturing cities drew people from other parts of the state. They also drew many of the new immigrants who were coming in so rapidly by 1900. In addition to these 10 large manufacturing cities there were many smaller ones scattered around the state.

Showing growth in a state or a town means using numbers. The past history of a community, either a town or a state, may be read in the number of people that were living there at a particular time. Normally we expect these numbers to increase as the years pass. Towns and states should grow just as families grow. If they don't, it means something is preventing growth. The job of the historian is to explain why this state or town grew slowly or rapidly at any period of time.

Between 1790 and 1840 Connecticut grew very slowly in population. While the United States as a whole was growing about one third larger every ten years, Connecticut was only growing one twentieth. The reason has already been given. There was not enough farmland for the young people who were growing up. They moved out of the state to Vermont, New York, or farther west.

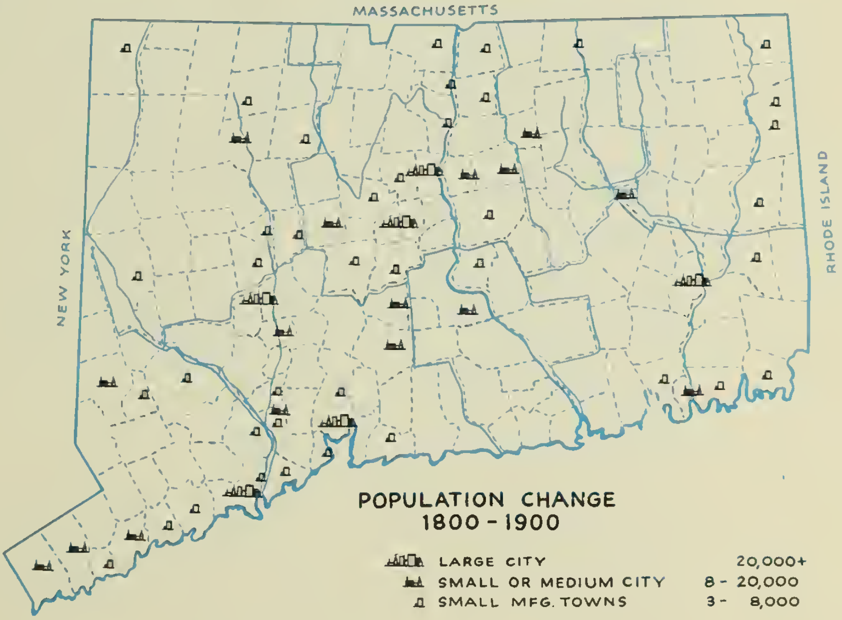
By 1840, the factories of the state were numerous enough to provide jobs for those young people who wanted to work in factories. Many of them stayed in Connecticut after this date instead of migrating west. Also, at this period a number of new immigrants began to come in. By 1890 our state was growing more rapidly than the country as a whole. Besides the immigrants from Europe many people were coming to Connecticut from other parts of the United States. In the early part of the 20th century, almost one-fifth of our population had been born in another state and had moved to Connecticut. Our growing factories, offices and stores provided jobs. They continue to attract people today.

The growth of a city shows up in the same way. When we compare the population of a town in 1800 with its population in 1850 and 1900 we can see whether it has grown and how fast. Some of our towns grew very rapidly, some grew only a little, and others have less people today than in 1800. The explanation is very much the same for the town as it was for the state. The lack of opportunity for work in a small community forces many of the young people to move out. On the other hand, factories being built in a city draw workers from the surrounding towns. The next map shows which towns grew and which did not grow in the period from 1800 to 1900. Compare this map with the ones of the railroads and the one showing where the uplands are.

Note that by 1900 we had six large cities, each with more than 25,000 people. They were Hartford, New Haven, Bridgeport, Waterbury, New Britain, and Norwich.

Of these New Haven was the largest with over 100,000 people. There were fifteen other medium sized cities with

The irregularity of population growth in Connecticut shows up very clearly on this map. Note the areas which lack symbols. This lack indicates they did not develop manufacturing and did not grow.

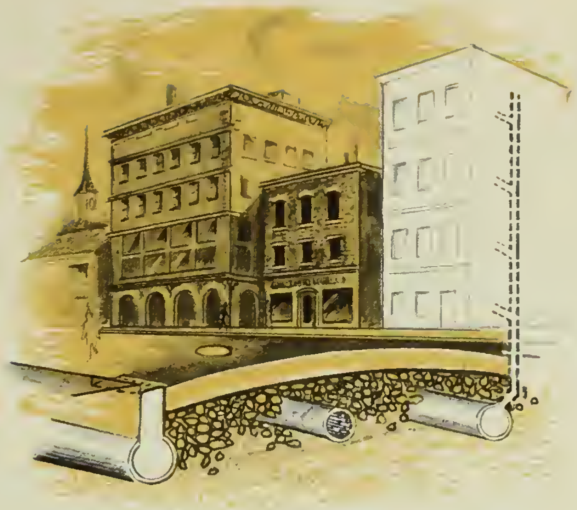


8-20,000 people. Thirty-nine smaller mill towns were busily engaged in manufacturing, with one or a few factories in each. The other 106 towns had failed to grow. The explanation differs from town to town; some lacked a railroad, others had very little waterpower. The ones on the coast that failed to grow had poor harbors. Most of them were in the uplands where there was very little good land for farming, and the rivers were small brooks.

Not all of the people in these cities were factory workers. In fact, most of them were not. They worked in stores or small shops, they were railroad workers, many did clerical work in banks or insurance companies. Some of them continued to farm on the outskirts of the city. A few were professional people: doctors, lawyers, or teachers. The thing that drew them to the city was its growing population. To them the population meant opportunities for work: store jobs, service jobs, or professional work.

Besides being larger than a town, a city has a number of problems which it must solve in a different manner. Securing pure water and disposing of sewage are relatively simple problems for the rural or village resident. Water is available almost anywhere in the state by digging a well 15-20 feet deep. Sewage can be gotten rid of by putting in a septic tank at a distance from the well. With their larger populations, the city must handle these problems differently. Water must be collected over a wide area, stored in lakes, and brought to the city in large pipes to supply the thousands of people who need it. Sewage also must be collected in pipes and taken away from the city. With the heavy traffic on city streets, they must be made of stronger and tougher materials than a country road needs. City streets may be made of concrete or asphalt and must be built more carefully. So much of the city is covered with pavement or buildings that rain cannot enter the ground directly, so the city must build storm sewers to carry it off. Telephone and electric light wires are carried on poles in the country, but the city has to put them underground in more densely settled areas. Some cities also provide gas for cooking purposes. This too is

Cities have many more problems than do small towns. They need roads built to withstand the heavy traffic, storm sewers to carry away rain water, other sewers to carry off household and industrial wastes, and pipes to carry power and telephone lines. All are shown in this sketch.



carried underground in pipes with outlets for individual houses. As you might imagine, the ground underneath a city is honeycombed with tunnels of one sort or another. In the very largest cities, although not in Connecticut, there is so much traffic on the roads that subways are built underground to carry passengers. City police and fire departments must be larger and have more equipment. The buildings are taller so the firemen need longer ladders.

All of these conditions are well known today and we have learned many ways to help us handle the problems. As Connecticut's cities originally began to grow in population and these problems came up, one after the other, each had to be solved. Today, while more people live in cities and large towns in Connecticut than live in rural or agricultural areas, many city workers and professional people are building homes in small towns on the outskirts of a city, called "suburbs." This has come about with improved roads and highways and the great increase in automobiles owned by the workers.

CLIMATE, SOILS, AND AGRICULTURE

CHAPTER 9

CLIMATE, SOILS, AND AGRICULTURE 1800 — 1900

The steady growth of the manufacturing towns in Connecticut was very helpful to the farmers of the state. When everyone in Connecticut raised his own food, the only market that the farmers could find was in the West Indies or in Europe. Now, with more and more people living in cities, there was a nearby market for Connecticut farm products. City people who were working 10-12 hours a day in factories had no time to raise their own food. Even if they wanted to, their houses were usually so close together that they didn't have enough land for a garden. As a result they turned to stores for the meat, vegetables, milk and butter they needed. These products were raised on Connecticut farms.

In 1800 one-half of the state had been cleared and was being used for crops, for hay, or for pastureland. By 1860 almost two-thirds had been cleared. This meant that from 1800 to 1860 Connecticut farmers were busy cutting down trees and clearing land. In some cases new farms were being created by young couples as had been true in the earlier period of our history. But most of the newly cleared land was being produced by farmers expanding their family farms. Now that they had markets for their farm produce they wanted to grow more fodder crops so they could keep more cows and other livestock.

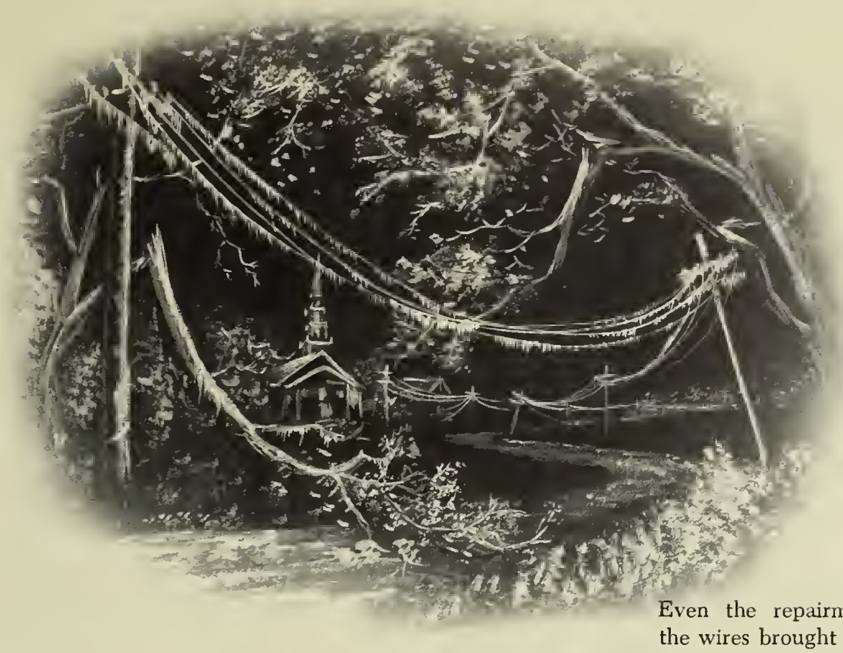
Farmers live much closer to nature than those of us who are city dwellers. They are more interested in the weather because it affects their crops. A chapter on agriculture is the best place, therefore, to describe the climate of Connecticut. Soils, too, should be described here, since they are equally important to the farmer.

CLIMATE OF CONNECTICUT

Mark Twain, who used to live in Hartford, once said of Connecticut's weather, if you don't like it, just wait a minute. He knew, as we all do, that its most prominent characteristic is that it changes frequently. It is hard to tell ahead of time whether a day will be fair or rainy, hot and sticky, or cool and breezy. Even the weatherman can be fooled. In the winter, snowstorms change to rain, or rain to snow; and bright sparkling weather alternates with cloudy grey days. Looking at the weather the way we do, it is changeable. From the point of view of a farmer, it is more reliable.

The farmer thinks in terms of a week or a month. If it doesn't rain today, it will probably rain tomorrow or the next day. He needs rain for his crops and usually he can be sure that in every month his farm will get from three to five inches of rain. As soon as he begins to plant his crops he needs warm weather. He waits until after the frosts have stopped before he plants. Our growing season, the time between the last frost in the spring and before the first frost in the fall, lasts from 150 to 180 days. It is longer on the coast or in the Connecticut Valley than in the interior and on the uplands.

Perhaps the best way to describe Connecticut's climate is to follow an average year from winter through spring, summer, and autumn, back to winter again.



Even the repairman working on the wires brought down by an ice-storm would have to stop work to admire the beauty of the glittering landscape.

January and February

January and February are almost equally cold months. Daily temperatures range from about 5° to 55° and average around 29° on the coast. In the interior or on higher elevations the temperatures are a little cooler. Because we are at the meeting place of two storm tracks, one from the west and the other from the south, we have alternating spells of very cold and warm weather. When a cold wave comes, the temperature drops to zero or even below, and for several days we have good skating unless the cold weather is accompanied by a snowstorm. These cold spells are interrupted by warmer days. The snow and ice melts and the air seems springlike. We call this the January thaw. Snowfall varies as does the temperature. The alternating warm and cold weather means that the ground in the southern part of the state is bare much of the time. In the normal winter we have about three feet of snow, but one storm's snowfall is usually gone before the next one arrives. In the interior of the state they have more snow, about six feet, and it lasts longer on the ground. Every year the coast is visited by one or more severe ice storms which bring down electric light and telephone lines and make us realize what life was like before the invention of electricity. We cook around our fireplaces and use candles for lighting. It is an adventure for one or two days.

March

As March arrives the days get longer and the temperatures begin to warm up. The thermometer hovers around freezing and gradually rises toward the end of the month. The month averages 35°. Weather is quite changeable. Bright, sunny, warm days chase away the grey, gloomy weather. But the heavy grey clouds always return. Rain is a frequent visitor and sometimes continues for several days at a time. We do get occasional snowstorms but they don't last long. The combination of heavy rains and warm temperatures brings what our ancestors called "mudtime." Unpaved roads and paths are watersoaked and can be almost impassable for several weeks. This is one of the least pleasant months of the year.

April

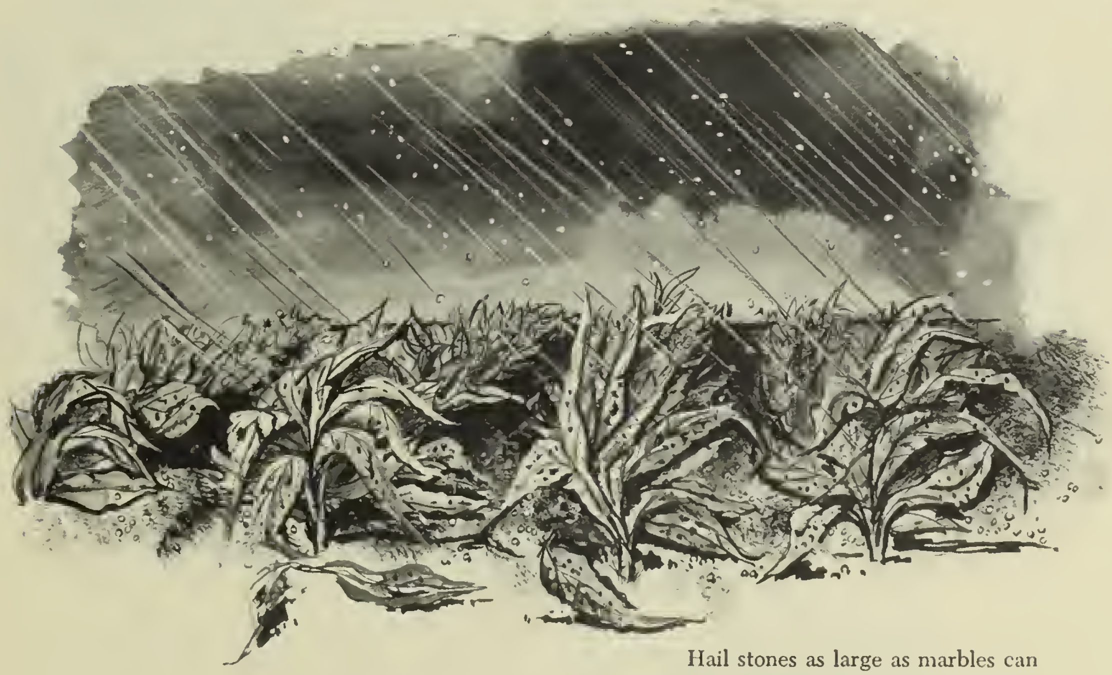
By early April, spring has clearly arrived although frosts are common throughout the month. The ground is drying out, temperatures average 47°, and the number of bright, sunny days increases. Rainfall is less than in March and the type of storm changes. Most of the three inches of rain come in brisk showers, which are soon over and the sky clears. Leaves begin to bud out, daffodils and forsythia blossom, the birds return from the south, and the farmers begin to plow their fields. Winter has not yet completely released its grip because there may be days of cold, with low grey clouds and steady rain, or even a rare snowstorm. With the drying conditions come days of danger in the forests, and April and May are marked by forest fires.

May

The sun is getting quite high in the sky and the temperatures continue to rise. The month averages 58°. Skies are generally clear and we have periods of unseasonally warm weather when the thermometer rises to the upper seventies. These warm days are offset by cold spells and even an occasional frost. The average date of the last bad frost varies with location in the state. Along the coast they come in late April, but farther inland they may come as late as mid-May. Rainfall averages between three and four inches, coming, as it does in April, in the form of brief showers. The trees are now in full leaf, and the flowering trees show splashes of color along the roadsides or on the hills.

June, July, and August

These are summer months. The days are much longer, fifteen hours long on June 21st, and the temperature averages between 65° and 75°. We often have spells of very hot weather, heat waves when the thermometer rises to over 90° by mid-afternoon. Since the air is usually moist, these hot periods are quite uncomfortable. Fortunately, they are always broken by a wind shift which brings cooler air. It may come from the ocean or from the north. Summer rainfall is heavier than in most of the other months. It averages four to five inches and comes in heavy, brief thunderstorms. Thunder and lightning are frequent summer visitors, appearing every few days. With the thundershower, hail comes occasionally which may do severe damage to the crops of the state.



Hail stones as large as marbles can do great damage to our vegetable and tobacco crops. Here a tobacco field is being destroyed by hail.

The summer heat wave may last several days, with temperatures that average several degrees above normal. Our usual evening drop in temperature does not appear and the nights are muggy and breathless. They may be broken by distant rumbles of thunder and flashes of lightning as thunderstorms develop. The rain cools the air and gives relief to restless sleepers, who now grope blindly for blankets or rise to stumble about closing windows against the rain. This relief is only temporary and the new day brings a return of the heat. By mid-morning the thermometer is in the eighties and the temperature continues to rise to mid-afternoon. When the official temperature reaches 95°, factories, stores and offices close, and people flee to the beaches for relief. Pavements shimmer in the heat and children watch eagerly for the ice cream man to appear on his bicycle or truck. Such hot weather is good growing weather for crops so long as there is enough moisture.

The wild fury of the hurricane has uprooted a century-old oak and the storm driven waves are washing over a coastal road.

September

In September the declining sun loses much of its strength. The days are noticeably shorter. Temperatures average 64° and the nights are definitely cooler. Autumn is coming. There still may be hot spells, but they are fewer and usually less severe. Rainfall is generally lower, but this is the month for hurricanes. These storms, originating in the tropics, have become more frequent visitors to Connecticut in the past few years. Even though the center of the storm passes harmlessly out to sea south of the state, heavy rains may drench the region. The heaviest rainfall that we have had in Connecticut was 13 inches from Hurricane Diana in 1955 which caused severe floods. By late September the leaves have begun to change color. The hills are glorious in flame red and gold and russet. The air is cool, the sky a brilliant blue, dotted with puffs of cumulus clouds. It is the last stand of summer, although the cooler night temperatures remind one that winter is coming.

A familiar autumn scene in the suburbs.

October

By October temperatures have begun to drop. The days are still warm but the nights are cool. The month averages 54°. Now the leaves are falling and the gorgeous canvas of late September has been shifted to the forest floor. This is the harvest season and work goes on busily in the fields. In the suburbs the odor of burning leaves fills the air as homeowners clean up, preparing for winter. The first frosts, coming on the average in mid-October, mark the end of the growing season. Like September it is a relatively dry month, averaging about three inches, unless a belated hurricane appears.

November

November brings a sample of grey winter days of lowering clouds, of drizzle and fog, of dampness and cold. But nights of frosty weather may be succeeded by days that are sparkling bright. The month's temperature averages 42°, but after the middle of the month, freezing temperatures are a common daily occurrence. In early November comes Indian summer, a spell of warm, almost summerlike weather with haze on the hills. This is the last remnant of Connecticut's fall. It lasts only a few days. Then a chill wind rustles the leafless branches, the clouds lower again, and a flurry of snowflakes remind one that winter is almost here.

December

The winter arrives in December, although even now there may be brief warm spells. Temperatures average 33°. Snowstorms are more frequent, although rarely more than a few inches at a time. The ponds freeze at night and thaw in the daytime. Cloud cover is more complete and the sun is invisible

The snow covers all scars and softens all outlines. It is welcomed by children of all ages. This young man plans on combining business and pleasure as he looks for sidewalks to shovel.

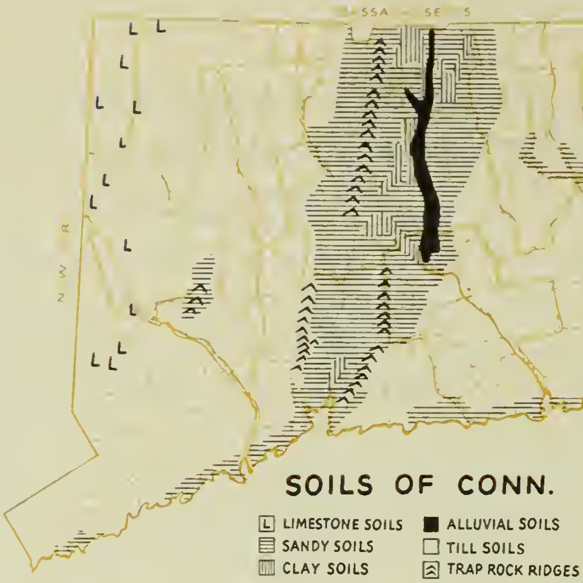
for days at a time. Days of snow or rain succeed each other, and in grey weather the year comes to its close.

We can summarize the climate of Connecticut in a few words and figures. We have a humid continental climate meaning about 45 inches of rain, evenly distributed around the year, and temperatures that range from 29°F. in the winter to 72°F. in the summer. These are coastal figures. In the interior it is colder in the winter and warmer in the summer. Monthly rainfall averages 3-5 inches. Some months may be quite dry, under one inch, but if one month is dry the next one is often wetter than usual. Snowfall is lighter on the coast than in the interior. The warmer coastal winter temperatures turn many snowstorms into rain or freezing rain in the shoreline section of the state.

SOILS OF CONNECTICUT

After temperature and rainfall the next most important thing for a farmer is the quality of his soil. From it his plants take food and water. Plants live on a liquid diet, and their food consists partly of minerals that are dissolved in the water they drink through their roots.

Soil is not just dirt. It is a combination of tiny rock fragments, water, air, dead vegetable particles, and tiny living plants and animals. The latter are so small that you can get millions of them in a teaspoon. All are essential parts of the soil. In addition, some insects and worms live in the soil. Each of these is necessary for a good soil. The rock fragments provide minerals, and the water the means by which the plants take up the minerals they need. Air is necessary because most plant roots refuse to drink if they are completely submerged in water. They are like human beings in this respect. It is hard for us to drink with our heads under water. The vegetable particles help to hold water in the soil in dry weather and also contain minerals that are useful. The tiny living plants and animals assist in the decay of the dead plant material in the soil. This releases minerals back to the soil so that other plants can take them up.



A simplified soil map to show how some of the larger areas of several soil types are distributed around the state. The text describes the advantages and disadvantages of each type.

The actual formation of soils is too complicated to describe here but we can note four different kinds of soils that are found in the state. These soils differ because they have been produced on different kinds of glacial deposits. The sediments deposited in the lakes that used to fill our valleys may be either sands and gravels or clay. A soil that develops on clay tends to be wet because water doesn't pass through it easily. Since the soil is wet and sticky, it is hard to plow in the early spring. The farmers usually leave such soils in grass cover and use them for hay or pastures.

Soils developed on sands and gravels are dry soils. The rain that falls passes through them easily. These soils are light, easily plowed in the spring, and good for growing tobacco or root crops like carrots, potatoes, and onions. Since they are dry, they may have to be watered in the summer if there is a spell of dry weather. Both clay and sandy soils lack large rocks.

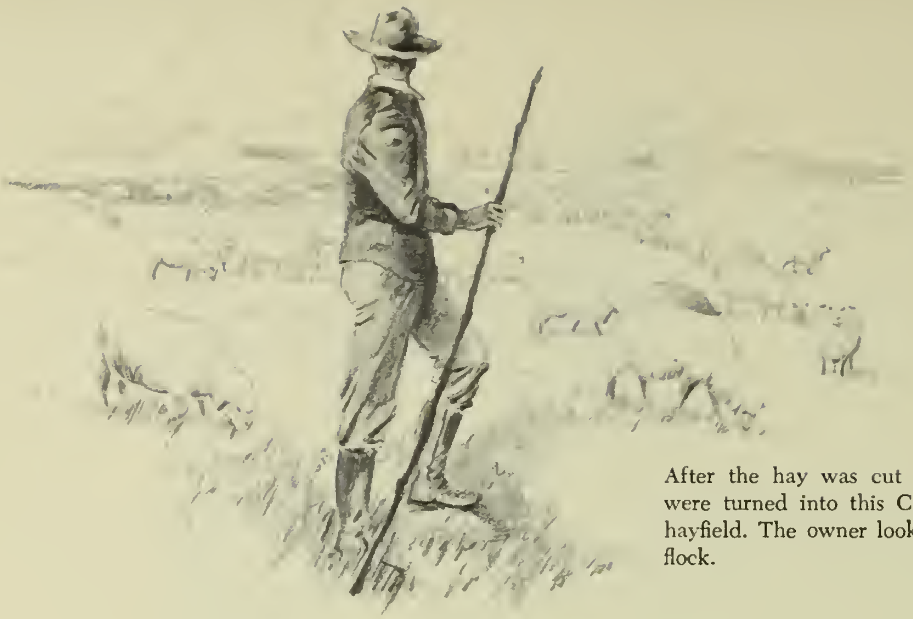
The third type of soil developed on *till*. This is a mixture of large and small particles that the glacier dropped helter-skelter on the ground as it melted. Because it is a mixture of various sizes of particles, it falls between the extremes of wetness and dryness that the clay and sandy soils represent. It holds enough water for crops but not so much that it is hard to plow. The main disadvantage to this soil is the number of rocks in it. After they have been taken out and piled up usually in stone walls, the field is very useful for farming. As you ride around the state you can often tell what type of soil you see by the presence or absence of stone walls. Where they are present it means the soil was formed from till. If they are absent the soil was formed from sedimentary materials.

A fourth type of soil has already been described. This is the alluvial soil deposited by the rivers in more recent years. It is composed of sedimentary materials, but is a mixture of sand and clay particles of various sizes. It is neither as wet as a clay soil nor as dry as a sandy one. It also lacks large rocks. After the annual flood has ended, it is as good a soil as you can find in the state.

FARMING 1800-1850

Farmers have an advantage over most manufacturers in that they can eat what they produce. But, if they want to earn the money they need to buy the things they can't produce, they must find a market for their produce. From the earliest days of farming in Connecticut the farmers have been trying to find some special crop that they could sell at a profit. In the colonial period they raised grains and animals that they shipped to the West Indies, but only a few farmers at that time were producing for the market. Most raised what they themselves needed and sold a few bushels of corn or an animal or two whenever they wanted cash to buy tools or sugar or some other product that they couldn't raise.

The first attempt to raise a product primarily for sale came when the new wool factories began to buy wool. Connecticut farmers had always kept some sheep, but only enough to provide themselves with wool for the home production of cloth. This wool was coarse in texture and the average fleece weighed only three pounds. The new wool factories wanted a better quality wool. In Europe there were sheep that produced a much finer grade of wool and more of it per sheep. These were the Merino sheep.



After the hay was cut the sheep were turned into this Connecticut hayfield. The owner looks over his flock.

A Connecticut man, General David Humphreys, brought the first Merino flock to his farm in Derby in 1802. Merino wool brought a high price in the market and in the first decades of the 19th century many farmers began to raise Merino sheep. By 1830 there were over 270,000 sheep in the state and our farmers were producing one quarter of all the wool used in the textile mills of the state.

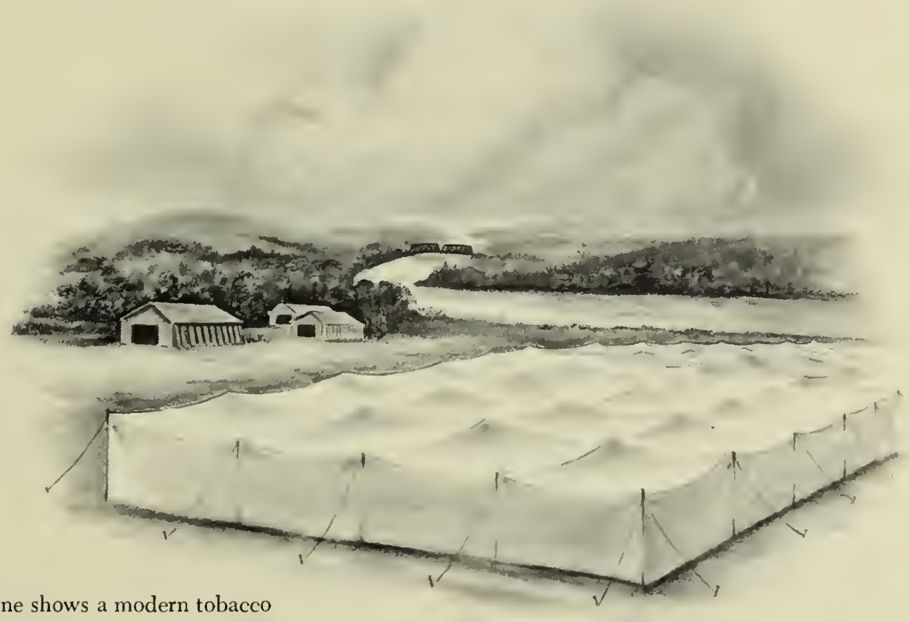
Unfortunately for Connecticut sheep farmers, the opening of the Erie Canal, and a little later the railroads to the west, opened Connecticut markets to western sheep raisers. In the west they could raise sheep for half the price it cost in Connecticut, and wool could be shipped here by canal boat or railroad at a low cost. Our farmers simply could not make a profit raising wool. After the middle of the century the production of wool declined steadily.

The next venture of Connecticut farmers was dairy farming. Again they simply expanded a branch of farming that had been present in the state from the very beginning. Cows, milk, and other dairy products had always been part of the farm scene. When wool raising became unprofitable, the farmers simply began to raise more cows. Without refrigeration, milk spoils quickly during the warm months of the year. There was no way of keeping fluid milk on the long trip from the farm to the city in those days so the farmer made his milk into butter or cheese. By 1845 our farmers were producing over a million

All butter in the early days had to be made by man or woman power in a butter churn.

dollars worth of butter and cheese every year. In towns close to the railroad and to the growing cities the main product was butter. The more remote farms made cheese which kept better. Butter remained the most important dairy product until refrigeration methods were invented after the Civil War. With refrigeration, the farmer could ship fluid milk to the cities and sell it for a larger profit than he could get for his butter. By the end of the century, more milk was being sold in fluid form than as butter.

Farmers in some parts of the state turned to other specialty crops. In the upper Connecticut Valley the early settlers grew tobacco. It was one of the plants that they had gotten from the Indians, but only a little was raised. About 1833 a new type of broadleaf tobacco was introduced and became very popular in making cigars. Shade grown tobacco, the kind raised under the cheese cloth tents today, was first sown in 1900. It was an expensive crop to raise, but it returned a good profit for those farmers who learned how to raise it. It became the most important field crop we have.



This scene shows a modern tobacco field under its cheese cloth tent. The tent creates a warm humid climate like that of the tropics and produces a superior tobacco leaf that is used to wrap cigars.

Potatoes, other vegetables, and fruits also became more important farm products as the cities grew in size. Greenwich, Connecticut supplied the New York market with most of its potatoes for many years. Westport, on the coast, and Wethersfield, in the Connecticut River Valley both became famous as onion growing regions. The acreages used to raise other vegetables such as sweet corn, cabbages, lettuce, and tomatoes increased with the increase in city populations that would buy the vegetables. Orchards, too, expanded for the same reason.

The last specialty that Connecticut farmers tried was poultry raising. Eggs don't like being jounced around. The closer they can be produced to the market the better. Egg production increased slowly during the first part of the century, then more rapidly. In the 20th century poultry farming has become the most valuable specialty in the state. By 1954 it accounted for over one-third of all farm income. The eggs laid by Connecticut's hard working hens today would completely cover the Connecticut Turnpike from one end to another.

SCIENTIFIC AGRICULTURE

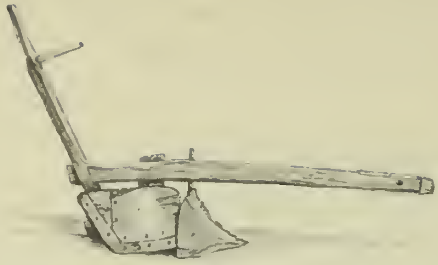
The new ideas that were changing the manufacturing systems of Connecticut were matched by equally important changes in farming. In 1800, farming practices were the same as they had been for hundreds of years. Thinking men had begun to suggest improvements, but the average farmer continued to follow the practices he had learned from his father. They would plant the same crop in one field year after year until they got too small a yield to be worth the effort of planting it. Then they would leave the field to grow up to grass. The grass would be cut for a few years until the weeds and bushes shaded out the grass, then it would be turned over to pasture use. In 1800 one-fifth of the state was classed as bush pasture which had originally been cropland. Few farmers bothered to take the manure that collected around the barn and spread it out on their fields. They didn't know its value as fertilizer.

In agriculture, as in manufacturing, Connecticut men were among the first to experiment with new ideas. Reverend Jared Eliot of Killingworth wrote the first agricultural book to appear in this country. His Essays on Husbandry came out at intervals from 1748 to 1761 and suggested changes that eventually became widespread in agriculture. Among the ideas he advanced were the planting of grass and clover in between successive crops of corn or potatoes, the use of mud as fertilizer, as well as using manure. It took a long time for his ideas to be accepted, but most farmers by the middle of the 19th century were farming in a much more scientific manner and producing larger crops as a result. Farmers began to use lime or gypsum, both containing calcium which is one of the minerals that plants need. Remember that lime is one of the common minerals of Connecticut.

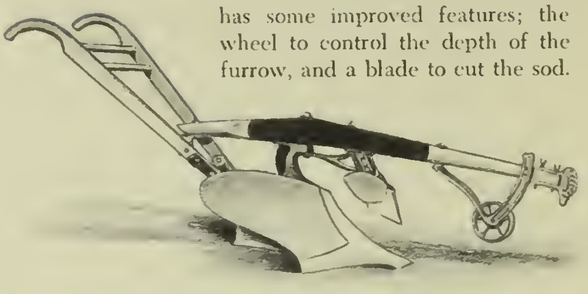
Better breeds of cattle were brought in and bred with our other stock: Ayrshires in 1822, Jerseys in 1846, Holsteins after the Civil War, and Guernseys in 1874. In this manner the farmers were able to raise cows that would produce more milk, just as the Merino sheep grew more wool. Similar attention was being paid to better grades of seeds.

This black and white cow is a Holstein.

The brown cows are Jerseys. They give much richer milk.

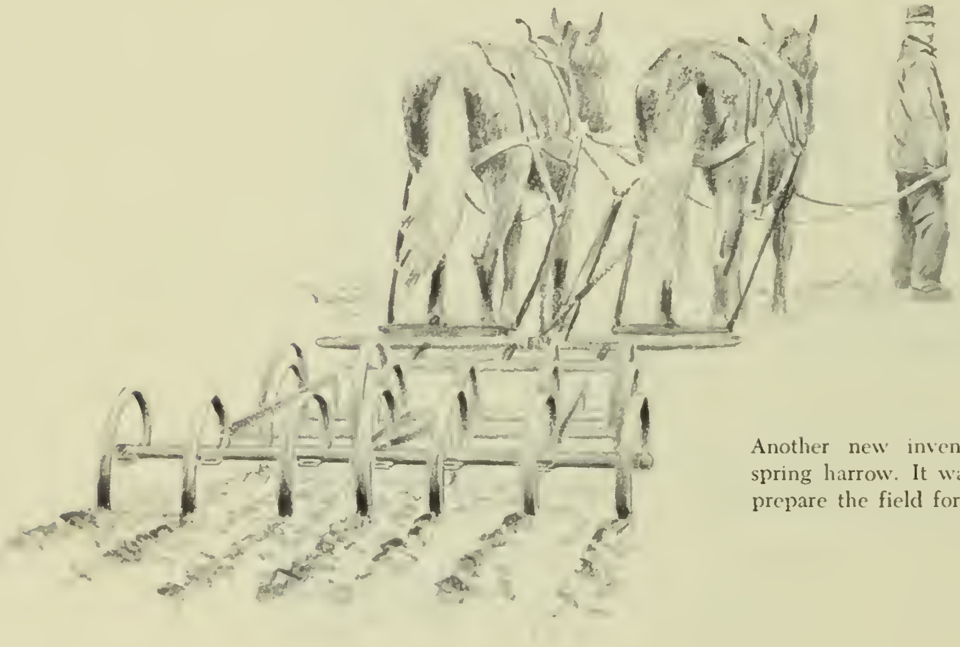


The wooden plow is the one in the illustration on page 123, and used during the first two centuries of Connecticut's history.



This plow, invented around 1840, has some improved features; the wheel to control the depth of the furrow, and a blade to cut the sod.

Improvements were being made in farm machinery as they were being made in factory machinery. Cast iron plows began to replace the old wooden plow with its metal facing. Although not invented in Connecticut, one of its early manufacturers was located in Hartford. After 1830 the Hawkes plow became famous in the state. By 1831 a horse-drawn mowing machine began to replace hand mowing of hay, and shortly thereafter a horse drawn rake was invented. Horse drawn cultivators came into use about the same period. Although water power was of little value on the farm, inventors made improvements in most of the usual farm equipment and during the second half of the century most of the work on the farm was lightened by this machinery.



Another new invention was the spring harrow. It was designed to prepare the field for planting.

Agriculture in Connecticut has generally been thought of as having been in a state of decline for the past 100 years. In a sense this is true. The number of families dependent on farming for a living has declined, so have the number of farms. On the other hand the value of the produce grown on the farms of the state has increased over 16 times, from 10 to 168 million dollars since 1845. The farms are fewer but they are more productive. The farm acreage has been reduced. In 1880, two-thirds of the land of the state was being used for agriculture. Today less than one-quarter is so used. In the last 80 years over one million acres of land has changed back to forest cover. We have fewer cows; in 1880 there were over 200,000, and today about 150,000. But the cows today, because of the improved breeds, give over twice as much milk. The same change can be seen in poultry. Where the average hen, as recently as 1940 gave only 175 eggs, today she gives 212 eggs. These are some of the results of research and scientific changes in farming.

NEW IDEAS CHANGE CONNECTICUT

CHAPTER 10

NEW IDEAS CHANGE CONNECTICUT

When we see the word "invention" we usually think in terms of things: guns, telephones, steam engines, television sets, and the like. But there are other inventions, too. These include new ways of doing things; new ways of thinking about things. Some of these have already been described. In the chapter on industry we noted the factory system, the new idea of collecting all the workers into a single building to make something. The chapter on agriculture described new ways of cultivating fields and the use of fertilizers and lime. The Fundamental Orders described a new idea in government. This chapter will cover three major changes in thinking in Connecticut that have come in the course of the past three centuries.

We change our ways of thinking much more slowly than we change material things. A new invention like the steam engine is accepted quite quickly, but new inventions in government take a longer period of time before people are willing to accept them. Sometimes it takes a lifetime or several lifetimes for the new idea to be accepted by all. Although these changes come slowly, they come as steadily and surely as water wears away stone. Some of the changes have had a great effect on Connectimay not be as well off as before. The slave owner, after his slaves were freed, had to do more work himself or hire it to be done.

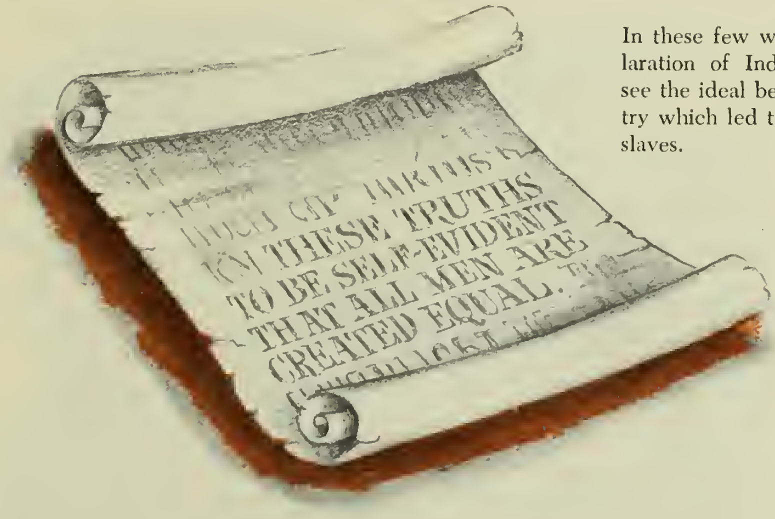
SLAVERY .

The belief that some people had the right to own other people goes back to the earliest beginnings of mankind. Probably the first slaves were captives in war, as they were in Connecticut. Many of the Pequot Indians captured in the Great Swamp Fight were sold as slaves and some people in Connecticut bought them. Pequot Indians did not make good slaves, they were too independent. It was too easy for them to run away to the forests that completely surrounded the tiny settlements in Connecticut. In the forests they could find refuge with their own people. Even Indians who were captured in wars in other colonies and transported to Connecticut as slaves proved to be no better. Most of the Indian captives from the Pequot War or King Philip's War were sold in the West Indies.

The innocent little negro boy watches in wonder a conversation that may deprive him of a father or a mother. Buying and selling human beings was one of the worst evils of slavery.

Negro slaves were present in Connecticut as early as 1639 and were brought in a few at a time during the Colonial Period. Some Connecticut sea captains were slave traders. By the time of the Revolutionary War there were about 5,000 slaves in the state. A few families owned large numbers of them, but in most cases the slaves were house servants and a family would own just one or two. Most Connecticut families did not own any slaves at all. This did not mean that they were opposed to slavery. It meant merely that they could not afford to buy slaves; they were too expensive. At this time almost everyone thought slavery was all right, in fact they felt that the negroes were better off as slaves in the colonies than as free men back in Africa. Here they would be taught to be Christians. A slave owner was expected to treat his slaves well, just as one was expected to treat his animals well.

When the Declaration of Independence was written, it did not fit very well with the idea of slavery. Read the first sentences of the second paragraph and note that it doesn't say, "all *white* men are created equal"; it says "all men . . .". This caused a problem for Connecticut people. If you believed the Declaration of Independence, how could you defend slavery? It was a new idea for many people, although some had already begun to think this way before 1776.



In these few words from the Declaration of Independence we can see the ideal behind our free country which led to the freeing of the slaves.

They tackled the problem as Connecticut people tended to tackle new ideas — slowly and gradually. In 1774, a law had been passed that forbade bringing any more slaves into the state. This prevented any large increase in the number of slaves here. The next step was to free any slave that had served in the Continental Army. There had been quite a few negro soldiers. David Humphreys led a whole company of them into battle. Then in 1784 the General Court passed another law freeing any slave's child that was born after March 1, 1784, as soon as he or she reached the age of 25 years. In 1797, the age was reduced to 21 years. By 1800, four-fifths of the negroes of Connecticut had become free; 4,331 free negroes to 931 slaves. But, not until 1848 was slavery finally abolished in Connecticut by law. At that date only a dozen elderly slaves, born before 1784, were still living. All the rest of the negroes were already free.

Although Connecticut did not completely abolish slavery until 1848, long before that date the people of the state had changed their ideas about slavery. They now agreed that slavery was wrong and should be done away with. But they disagreed on how to get rid of it. Some were active in societies that were working to eliminate slavery in the whole of the United States.

When well led, negro soldiers served valiantly in the Revolution. This company might be the one led by David Humphreys.

The picture shows a party of freed slaves embarking for Liberia in 1822. The founder of this state was Jehudi Ashmun of New Haven.

There were anti-slavery societies in most of the larger towns in the state. They brought in speakers to help persuade the rest of the people to work against slavery. Some supported the Colonization Society which planned to send the freed negroes back to Africa. The Society aided the negro colonists with money and supplies. Only a few were actually sent, but from this small beginning came the little nation of Liberia that exists in Africa today. A few Connecticut people were more active still. John Brown, who died on the gallows in Harpers Ferry, Virginia in 1859, was hanged because he tried to stir up a slave rebellion there. Harriet Beecher Stowe wrote *Uncle Tom's Cabin.* This famous story helped to change the minds of many people about slavery. Both of these people were born in Connecticut.

The new ideas about the wrongness of slavery were shared by a majority of the people in the Northern States. In the South things were quite different. Eli Whitney's invention of the cotton gin had made cotton growing and slavery profitable there. A man could buy new land in Georgia, Alabama, or

A southern plantation house of Georgia or Alabama surrounded by the cotton fields that made it possible. Even children could help pick cotton.

Mississippi, move in with a crew of slaves, clear the land, plant cotton, and become rich in a few years. These people thought slavery was necessary and objected strongly to Northerners who were trying to abolish it.

The Declaration of Independence had been written largely by a Southerner, Thomas Jefferson. When he wrote it, in 1776, many leaders in the South felt that slavery was wrong and should be done away with. At this time they agreed with the Northerners. As time went by slavery became more and more unprofitable in the North and the number of people opposing slavery grew. In the South the reverse was true. Slavery was profitable there and the number of people opposing slavery declined. The two parts of the country had grown apart in their attitudes toward slavery and toward other things as well. The Southerners were afraid of what they thought the North wanted to do about slavery. When Abraham Lincoln was elected president in 1860, they left the Union.

CIVIL WAR

To the Federal Government in Washington, and to President Lincoln, the big question was whether to let the Southerners go in peace or to try and hold them in the Union by force. The question was answered when the Southerners fired on the

American flag at Fort Sumter in the harbor at Charleston, South Carolina on April 12, 1861. Immediately, Lincoln called for volunteers to preserve the Union. The men of the Northern states responded to the call. Among the first to volunteer were many Connecticut men.

As has been true in all other wars, Connecticut contributed more than her share of soldiers. Of the 80,000 voters in the state in 1860, almost 55,000 served in the army and another 2,000 in the navy during the war. The new immigrants volunteered as eagerly as the native born. At least one of the 30 Connecticut regiments fought in almost every major battle of the war from Bull Run, through Antietam and Gettysburg, to the final battles in April 1865. The First, Second and Third Connecticut regiments led the advance in the first battle of the war, Bull Run, and covered the retreat of the Union Army at the end of that disastrous day. The First Connecticut Volunteers provided General Grant's honor guard when he accepted Lee's surrender at the end of the war. Of the men in service from this state, over 20,000 were killed or wounded, died of disease, or were listed as missing in action. The cost of the Civil War to Connecticut families was great, but the Union was preserved to help America become the greatest democratic nation of free men on earth.

At night around the fire at some Civil War campground a new recruit listens in fascination to the talk of some old soldiers.

On January 1, 1863 President Lincoln issued the Emancipation Proclamation and slavery was ended officially in the United States. The prohibition of slavery became part of the Constitution in 1865 and is accepted today by all American citizens. The negroes in 1865 were not accepted as equals, however. That would take time. In Connecticut they received the vote in 1876. One by one the other barriers against them came down, more rapidly in Connecticut than in some other states. It has taken a long time, but we have finally come to believe that all men, regardless of the color of their skins, should have equal rights. Most of us today act in keeping with this belief.

CHANGING IDEAS ABOUT GOVERNMENT

Nowhere in the world of 1635 were the ideas, which we hold today as democratic, wholly believed in, not even in Connecticut. Although the Fundamental Orders of 1638-9 stated that the government of the new colony was to be chosen by the inhabitants, it did not mean all the people. In the first place, only the adult males were considered "inhabitants and freemen," and they were a select group that had migrated together to Connecticut. All of them were friends and members of the same church. You will remember that the groups that came to Connecticut were primarily church groups following a minister. Within the group everyone knew everyone else. The Fundamental Orders, in a sense, were the men who had migrated to Connecticut saying that *they* would elect the government. If any new man came in to the colony, the older residents held the right to decide whether or not he would be accepted as an "inhabitant and freeman." It was a kind of private club; these were the voters.

During the first 100 years or so the club didn't increase very much in numbers, although the total population of the state did increase. Not all of the newcomers were accepted as "inhabitants and freemen." They were permitted to settle in the towns, but they did not receive the right to vote. It was easier for a newcomer to get accepted if he belonged to the church

Voting in seventeenth and eighteenth century Connecticut was limited to relatively few of the adult males. At this date the idea that all adults should have a vote was not widely held.

that was first established in most towns. It also helped if you owned a large amount of property. The sons and grandsons of the original settlers were usually accepted when they reached the age of 21, provided they were good citizens. Even in the middle of the 18th century only one man in every nine was a voter.

Although individuals who were not accepted as voters may have objected to being left out, there was no general belief that every man had a right to a vote. In fact there was a strong belief that the government should be left in the hands of the most capable men. So long as the government was run effectively, most people were content.

The government of Connecticut from 1638 to 1818 was not a bad government, but it was not a democratic one. A few families controlled the state and passed the top positions back and forth between them. For this period, 37 families provided all the top officials of the state. In the 180 years between these dates we had 180 elections, but we had only 23 different governors, 27 deputy governors, 13 secretaries of the state, and 13 treasurers. In several cases a man would serve in more than one position. For example, Thomas Welles served as treasurer for 6 years, secretary for 7 years, deputy governor 4 years, and governor 2 years.

The relatively small numbers of men who could vote in state elections caused some dissatisfaction with the government. But there was an even stronger feeling of dissatisfaction with the control that the church exercised in the state. In 1644 the General Court ruled that all men, regardless of the church that they worshipped in had to support the Congregational Church financially. Other churches were discriminated against at first. Gradually the increasing numbers of people in the state who were not members of the Congregational Church forced a degree of toleration. By the end of the 18th century those people who belonged to and supported another church were excused from having to pay taxes to support the Congregational one.

We did not have a written constitution. Our government was based upon two papers, the Fundamental Orders and the Royal Charter of 1662. The charter largely repeated the same ideas that had been in the Fundamental Orders. To many citizens in the state it seemed strange that we should base our government on a charter from a king whom we no longer accepted. They also felt that we needed a constitution that would be written in terms of the new ideas that were sweeping the country. They wanted more people given the right to vote and wanted to separate the state government and the Church. These two ideas and many other changes were included in the Constitution of 1818.

This new constitution eliminated the property qualification for voting by saying that any man who had served in the militia or who had paid any state tax in the previous year could vote. It also clearly said that no preference would be given to any church and that everyone had the right to worship as he wished. Here again we can see a change that has come in our way of thinking. The Constitution of 1818 created a democratic government for the state.

But even in 1818 the government was not as democratic as it is today. Half of the adult citizens still lacked the right to vote in elections, these were the women. The idea of women voting was something that the men of the 17th, 18th, and 19th centuries would have opposed strongly. They felt that the job of governing was something that only men could do. In general, the women of this period were content to let the men do this work. But, as our way of life changed so that the women left their homes to work in factories and stores and offices, they began to feel that they also should have the right to vote. Many men agreed with them. The women of this country were finally given the vote in 1919 by the 19th amendment to the Constitution of the United States.

Not until the end of the first World War were women given the right to vote in Connecticut. It was over one hundred years after all men had received that right in 1818.

EDUCATION

The third major change came in the field of education. In some ways there was less of a change here than in our ideas about slavery and government. The Puritans who first settled the state had very strong opinions about the value of education. In 1644, the General Court passed a law requiring every

GOING FISHING TONITE?

This young student may think he is getting away with something, but the teachers in 1750 had just as sharp eyes as they have today.

town of a certain size to support a school. This law has never been withdrawn and our present public school system is our way of meeting that requirement. In 1690, another order of the General Court made families send their children to schools under threat of a fine if they didn't. Although this has been changed somewhat, each family today faces the same situation.

The changes that have come have been in an expansion of the amount of education that the state and towns are expected to provide. Today we realize that a grammar school education is not enough to prepare people for our complex world of atomic energy, rockets, and space travel. Everyone needs much more education now. All that the law said in 1644 was that the children had to be taught reading and writing. Today many other subjects have been added, mathematics, history, geography, languages, and sciences.

Even as early as 1644 our ancestors realized that some men would be going on to college and required that the larger towns support schools that would prepare students to enter college. At that time they did not believe that the state should provide colleges, although they did believe in having colleges in the state. Almost from the settlement of New Haven attempts were made to start a college. The school that was to become Yale University finally opened its doors to its first student at Saybrook in 1702. Both the town and state governments helped the school in its early days with gifts of money or land. In 1716 it moved to its present location in New Haven where it continued to expand, adding the separate schools of medicine, law, science and others which made it one of the world's finest universities.

Other private colleges and universities were started in the 19th and 20th centuries. Trinity, Wesleyan, and Connecticut College for Women were the first. Since there were several excellent private colleges and universities in Connecticut, no one felt the need of the state providing publicly supported college level education except in special areas of training. In 1849, the first state normal school was set up in New Britain to prepare teachers; and in 1881, Storrs Agricultural College was created to help improve agricultural practices in the state.

In this picture may be seen some of the early Yale buildings. It is not only one of the oldest of our universities but is one of the best.

A large growth has come in both areas. Three other normal schools were set up by the end of the 19th century. Each has expanded its enrollment and the variety of courses taught and today the four are State Colleges giving liberal arts courses similar to the private colleges in the state. They are located in New Haven, New Britain, Danbury, and Willimantic and provide college education largely at state expense to the young people of the state. The agricultural college at Storrs has also expanded its number of students and its courses, even more than the state colleges, and has been re-named the University of Connecticut. It, too, provides college level courses at state expense.

There has been a gradual change in our attitude toward the amount of education that a child needs. At one time it was enough that he had a few years of a grammar school education. As the years passed we gradually increased the amount that we felt was necessary. The age at which a young person is permitted to leave school was slowly raised to the present age of 16. This rise in the school leaving age meant that the government had to provide more educational facilities for all young people. Many parochial schools have been established, almost all since 1880.

Recognizing that all students are not interested in college preparation, other types of schools and special courses were introduced. Trade schools to teach the skilled trades and business courses to train young people to enter the business world were added to our educational program. Today, partly because of the high cost of a college education in a private college, the state feels that it should help to provide college educational facilities for the young people of the state who wish such an education.

The changing ideas about education are similar to the changes that have come in our attitudes toward the negroes and toward government. All show a greater interest in the average man and woman, an interest in helping them to share in all things. The little group that ran Connecticut in the early years has been expanded so that today it includes all the men and women of the state. All are to be considered equal before the law, all are to have an equal share in the government, and all who study hard and can do the work are to be given a chance at a college education.

These three changes are examples of changes that have come in almost every part of our lives. Our ways of thinking about sickness, about crime and criminals, about mental health, have changed as much or more than our ways of thinking about the three that have been described. Perhaps you can trace the changes that have taken place in each of these other areas, if you have the time and the interest. Space does not permit us to include them here.

AFTER THE CIVIL WAR

CHAPTER 11

AFTER THE CIVIL WAR

1865 — 1900

Connecticut 100 Years Ago

If you had been able to fly over Connecticut in 1860 in a high flying jet plane you would have been able to recognize the state. The general outline would have been familiar. Up in the northwest the wooded hilly upland with its deeply carved river valleys, the Housatonic, Shepaug, Pomperaug, and Naugatuck would have appeared much as it does today with the exception of less woodland. In the center would stretch the broad flat Connecticut Valley with the light green and browns of its open fields. To the east would lie the many-branched Thames River system with its alternating forest and field checkerboard pattern. And along the Sound you would have recognized our irregular coastline with its rocky headlands and glistening silvery beaches.

Only as your plane came down to land would the strangeness of Connecticut 100 years ago begin to strike you. As you began to see the details of the landscape, especially the man-made details — the buildings and roads — you would start to wonder if this was your Connecticut after all.

This picture of a 19th century street scene should be contrasted with a modern residential street scene.

It wasn't. It was a more rural Connecticut, one without automobiles, or electricity, or planes, or suburbs. The cities were smaller and fewer. The fields were wider and more numerous. In the towns only an occasional tall, smoking chimney would show a factory run by steam power. The people were largely dependent on power of falling water, or of moving wind, or the muscles of their animals.

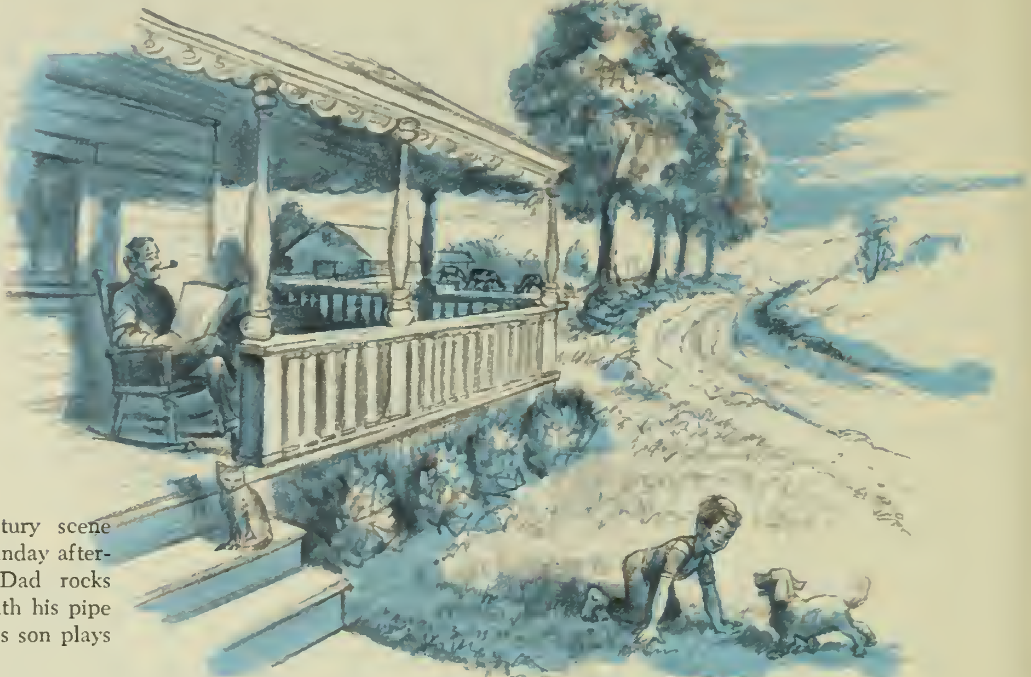
After you landed and began to travel through your city, the feeling of strangeness would be mingled with flashes of familiar scenes. Some of the buildings you would recognize because a number of our public buildings and many private homes were already standing in 1860. They would look much newer, of course. Most of the streets would be unpaved, and there would be little traffic except in the center of the city. The people would be dressed differently.

You would note the lack of automobiles and trucks. And, if you sniffed you would enjoy the lack of gasoline fumes in the air. You would be amazed at the numbers of horses visible. On land most people used horsepower. If you turned to the railroads, thinking that these at least would be familiar, you would see a number of differences. The locomotives and passenger and freight cars would be smaller. You might recognize the railroad station. Some of them had been built by this period.

If you entered a store or a business office, the word "old-fashioned" would flash into your mind, and it would be just the right word. This was the period before the invention of most office machinery. There were no typewriters, or adding machines, or cash registers, or telephones, not even electric lights. The clerks would be using pen and ink and making change out of cash drawers. The offices would be smaller. On the walls there would be whale oil lamps or perhaps candles in candle holders. If you wanted to get in touch with someone in those days, you wrote a letter and mailed it, or sent it by messenger. You could send a telegram because the telegraph had been invented.

The homes would impress you in the same way. There was a lack of the machinery that makes life easier today. There were no vacuum cleaners, refrigerators, electric stoves, or air conditioners. Cooking was done on a coal or wood stove, and heating done the same way. It was the job of the children to keep the wood boxes filled. Few houses had central heating. On the furniture, more wood and less cushioning would be visible. Outside the house the broad verandas with their hammocks and rocking chairs would remind you that life moved

A clerk of today would feel very much out of place in this office of the post Civil War period.



This peaceful mid-century scene might well be titled "Sunday afternoon on the farm". Dad rocks quietly on the porch with his pipe and newspaper while his son plays in the front yard.

at a slower pace then. The better homes had pianos and often guitars, banjoes, or violins. Behind the house, in the residential areas, would be a barn with stables for the horses and a coach house for a carriage and a buggy. Over it all would hang the pleasant odor of stabling — of horses and new mown hay.

In the countryside the differences would be very marked. None of the roads were paved. The better ones had a gravel surface and were two lanes wide. Most were simply one lane dirt roads, two ruts with a weedy center strip, curling back and forth through the landscape. Much more of the land was being cultivated; in fact, little of the level land would have had a forest cover. The fields were all fenced in. In the till region stone walls were used, but in the valley areas there were wooden fences. Again you would have noted the numbers of animals: horses, cows, and sheep in pastures, even pigs and chickens near the houses. There would be no roadside signs, except where a tobacco company had persuaded a farmer to let them paint one on the side of his barn. Between towns there would be no chance to stop for an ice cream cone or a souvenir. Stores were found only in the villages. And, above all, there would be no gasoline stations or roadside restaurants.

When your road crossed a railroad you had better stop and look both ways. There were no automatic lights to warn of the approach of a train, although the trains did whistle for a crossing. All crossings were level crossings; there were no bridges or tunnels except in the cities. Of course there would have been fewer trains running except on the main line. People still didn't travel very much. But, if you wanted to travel any great distance, you would have to take a train.

Along the seacoast, also, the scenes would be strange to your eyes. The little seaports would be busy places and the larger harbors would be white with the sails of fishing boats going and coming. Along the wharves in cities like Bridgeport, New Haven, New London, or Stonington would be large sailing and steam vessels loading or unloading cargoes. Much of the freight went by sailboat, although passengers demanded the speed of a steamboat. Between the coastal towns again the land would be unoccupied. City residents had not yet discovered our beaches or the attractions of our irregular coastline. The long white beaches that are alive today with people in the summer and dotted with cottages, at that date lay deserted in the sun. Near the cities the bathing beaches were used, but less often than today.

EFFECT OF THE CIVIL WAR

The Civil War had a tremendous effect on life in Connecticut. The changes that resulted appeared slowly, but, by the end of the century, they would produce a very different Connecticut from the one described. Some of the changes had begun to appear before the war, but the war hastened them and strengthened them. They will be described under several headings: agriculture, industry, transportation, and maritime activities.

In Agriculture

The immediate effect of the war on agriculture was an increased demand for food and higher prices for farm products.

This new mowing machine did the work of a half-dozen men. It represents here all the new inventions in agriculture.

The government had to feed thousands of soldiers and sailors and purchased farm products from all parts of the country. For the farmer it was a period of prosperity. He was handicapped by a lack of helpers since his sons had gone into the army. But shortly before the war farm machinery had begun to come on the market. With the help of mowing machines, horse rakes, cultivators, and other pieces of farm equipment, Connecticut farmers produced bigger crops than ever before.

After the war ended there was a sharp decrease in the demand for agricultural products. The government was no longer a major buyer of food. The armies had been dismissed and the soldiers were back at home, where many were again producing their own food. Fortunately for Connecticut farmers the growing population of the Connecticut cities continued to need food. Even so, farm acreages began to drop in the state. This was partly an after effect of the war. Many Connecticut soldiers never came home to stay. Some had died in battle, others had seen the opportunities of the city and decided to leave the farm for city life. Still others had become familiar with the great part of America that lay west of the mountains and the Mississippi River and decided to migrate west.

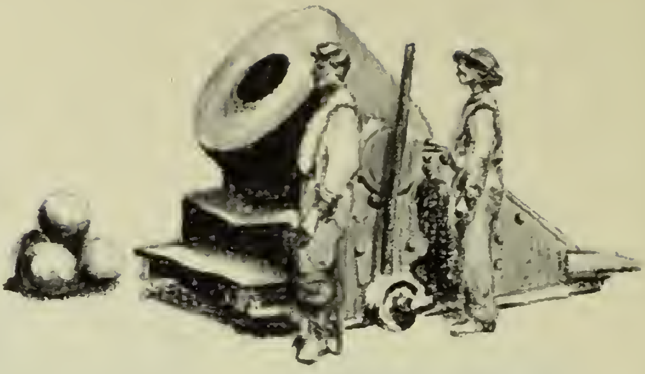
By the end of the 19th century in the uplands of Connecticut, along back roads, travellers could see an increasing number of abandoned farms like this one with tumbled down barns and fields growing up to brush.

Many a Connecticut farmer found that no one in his family wanted to farm his land. As the farmers grew old, some sold out and moved into the city. Other aging farmers stayed on the farm, but gradually cut down on the amount of land that they cultivated, and the forest slowly came back. Between 1880 and 1890 there was a sharp drop in the number of farms in the state and an even greater decline in the cultivated acreage. The changes in farm products have already been described in Chapter 9. It was in this post-war period that Connecticut finally made her choice. From now on she would concentrate on manufacturing.

In Industry

The war gave great encouragement to the manufacturing industries of the state. Several of the particular branches of manufacturing in which Connecticut specialized were greatly in demand in war time. These were guns and ammunition; small hardware like knives and buttons; iron goods, cannon and armor plate; and textiles. Production of each of these items spurted upward. This meant more employment for Connecticut people. More factories had to be built. The railroads had more

The Ames mortars were famous in the Civil War. A mortar was a heavy cannon that threw its shell high in the air to come down on enemy trenches hidden behind trees and hills.



goods and people to transport. When the war ended the war demands stopped, but manufacturing in Connecticut continued to expand.

If we compare 1850 and 1900 in manufacturing we can see the change that came. The number of workers in manufacturing increased over 3½ times from 51,000 to 187,000, and the value of the products made in Connecticut increased 7½ times from $47 million to $352 million. The clustering together of the factories in relatively few towns and cities was noted earlier in the chapter on cities. Many Connecticut firms became world famous in this period. Colt, Singer, Winchester, American Brass, Seth Thomas, Yale and Towne, are only a few of these. Before the end of the century we were making 65% of the pins and needles, 73% of the manufactured brass and copper, 75% of the clocks, 33% of the silver ware, 66% of the bells, about 80% of the ammunition and 25% of the firearms that were manufactured in the United States; to name only a few of the most important of our industries.

Although manufacturing was becoming more and more important in the state, the workers were not yet benefiting. Wages were still low, hours were long, and working conditions remained dangerous. In 1860 the wages in the major industries ranged from $3.00 to $14.00 a week. The textile industries paid the lowest wages and employed many children. But even in the highly skilled trades, and in the metal industries, wages were rarely as high as $2.00 a day. Remember, this is for a 10-12 hour day. Although wages increased somewhat in the war period, prices rose even faster so that many workers were worse off at the end of the war than they had been earlier.

You have to know what the prices were to understand the problem of a worker in 1860. (If prices are very low, then low wages are not as much of a handicap. For example: if a man earns $2.00 a day and prices are so low that he can feed, clothe, and house his family for $1.50 a day, he is better off than a man who earns $5.00 a day, but who has to pay $4.95 to feed, clothe, and house his family.) In the Civil War period prices were much lower than they are now in certain things. Meat cost very little: beef—14 cents a pound, chicken—16 cents, and lamb—12 cents; but coffee was relatively expensive, 22 cents a pound. Butter cost the same as coffee. Cotton cloth was 12 cents a yard, but knit stockings were $3.00 a pair. Obviously the poorer people would eat less coffee and butter and would have to knit their own stockings.

In the second half of the 19th century many workers joined unions to try and improve their conditions. The activities of the unions were resisted by the mill owners, and there were many strikes. In most cases the workers struck to get higher wages. About half of the strikes were successful in winning wage increases. By 1890, in general, wages had been raised 30-50%. But, since the prices rose about the same amount, the workers were not much better off at the end of the period.

One other change came in industry during this period. This was the shift from waterpower to steam to run the factories. With steam power you could place your factory wherever you wanted, you no longer needed a stream-side location. Remember that in the first half of the century if you wanted to build a factory that needed a lot of power, you had to locate near a rapidly flowing stream. Its possession of water power was the reason why the Quinnebaug Valley became a manufacturing center. Now the factories could locate in the larger cities even if their new locations had no waterpower. The changeover can be seen in figures. In 1870 two-thirds of the power used to run factories came from falling water and one-third from steam.

By 1900 the water wheels were only providing one-third of the power and steam was producing almost all the rest. By the latter date, two new sources of power, that would become very important in the 20th century, had already appeared. These were the gasoline engine and electricity. They will be described later.

In Transportation

The war period was a prosperous one for the railroads. They had almost more traffic than they could handle. The factories were pouring out a flood of manufactured goods and had to import thousands of tons of copper, iron, cotton, wool and other raw materials. More people were traveling than ever before, some on business, others for pleasure. As a consequence, the railroad owners began to build more lines.

The Hartford-Salisbury line has already been mentioned. This line was continued west into New York state, reaching the Hudson River at Poughkeepsie. Another east-west line was built ten years later, from Waterbury through Danbury to Fishkill on the Hudson. Both of these lines were planned to tap the

Hand labor built most of our railroads. After the line was graded, the ties were laid down and then the rails spiked to the ties.

traffic coming east from the Great Lakes, and divert it to Atlantic coast ports in Connecticut or Rhode Island. Or if the freight traveling on these lines was destined for Connecticut cities, it would be saved the long detour through New York City, as the map on page 163 indicates. New Haven tied herself to the line from Danbury to Fishkill by constructing two short links, to Derby in 1871, and from Derby to the Housatonic railroad via Shelton in 1888. Middletown also joined the competition by building a line to Waterbury in 1888.

The New York-Boston traffic remained the most profitable. In 1870, New Haven started the Airline railroad through Middletown, Willimantic, and Putnam to cut the mileage between these two major ports. Also in the eighteen seventies, the lower Connecticut River finally got its railroad line from Hartford to Saybrook. The river itself was bridged at Middletown and Saybrook by drawbridges. A drawbridge can be opened so that it doesn't interfere with the busy river traffic.

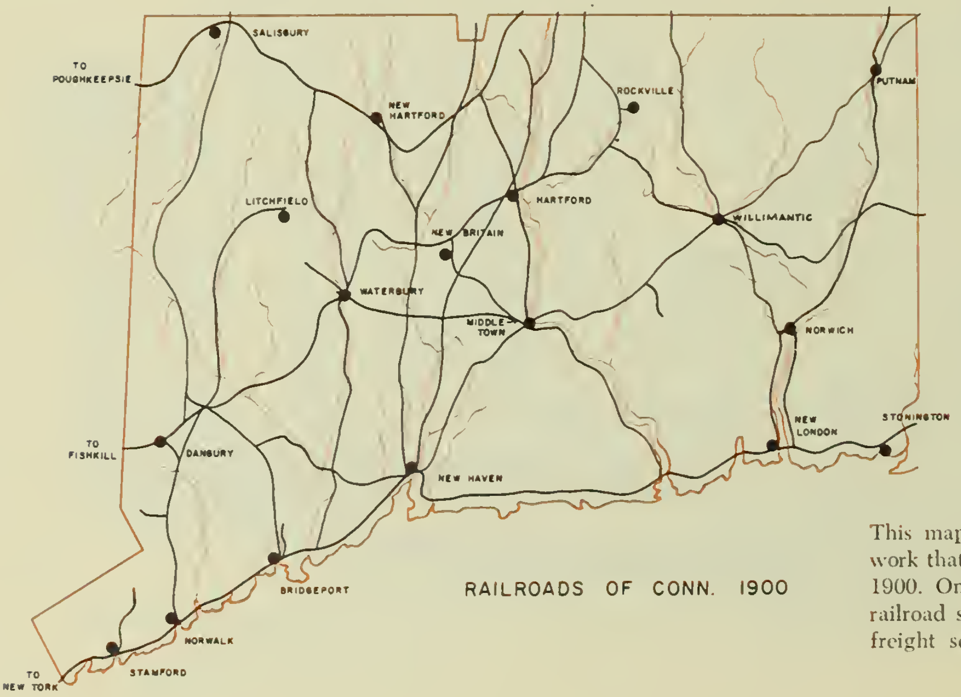
Railroad construction after the war was strongly pushed by two (perhaps over optimistic) groups of men. The first were the local town boosters who were certain that all their town needed to grow into an important center was a railroad. They provided local support and the money for construction of the railroad. The other group was the railroad owners who were equally convinced that all any region needed to make it prosperous was a railroad. They looked around for productive regions that lacked a railroad and then tried to get local support.

As early as 1844 the upper Connecticut Valley, from Hartford north, had one railroad. It ran from Hartford north to Windsor Locks on the west side of the river, then crossed over and ran up to Springfield on the east side. The entire valley region was a rich agricultural area. It wasn't hard to persuade local boosters that other railroads which paralleled the first line would be profitable. In 1876 a second line was built from East Hartford north into Massachusetts; and, by the end of the century, a third line was constructed north on the west side through

Suffield. In the Shepaug River valley local boosters in Litchfield succeeded in getting a railroad built north from the Housatonic line in 1872.

By 1900, Connecticut had the most complete network of railroads in the whole country. We had 998 miles of track that quite literally criss-crossed the state. There was hardly a house in the state beyond the sound of a locomotive whistle. We actually had too many railroads. Going from Hartford to New Haven, you could travel by any one of three lines; the Canal line via New Britain and Plainfield; the direct line, the first one built; or by way of Middletown and the Airline. Thus the three railroads had to divide the profits that came from transporting people and freight between these two towns. What would have provided a good profit for one was not enough for three. When new, competing methods of transportation came, the railroads would be in trouble.

In the cities a new system of transportation had already been started. As houses were built farther and farther out from the center of town some method of public transportation was needed to carry people from home to work and back. The one that was invented was the horse car. This was a small, light car



This map shows the railroad network that existed in Connecticut in 1900. Only a few towns lacked a railroad station and passenger and freight service.

This scene is typical of the late 19th century Connecticut city with the horse car, paved sidewalk, and numerous power and telephone wires.

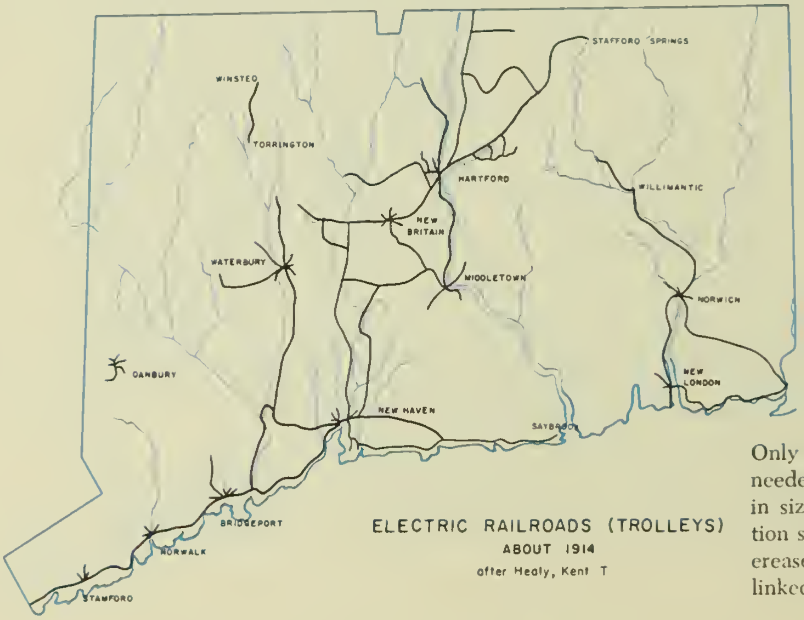
built to run on railway tracks and pulled by horses. The first "horse railroads" were built just before the Civil War in Hartford and New Haven. They expanded their miles of track steadily during the last part of the 19th century. Each of the larger towns and cities had its own transportation company. In 1895 electricity became the source of power, and in the first years of the 20th century the "trolley" entirely replaced the horse car.

Although they were first built to connect the various sections of the rapidly expanding cities, when electricity gave them higher speeds, some of the lines were extended to neighboring cities. These competed with the railroads for passenger traffic. Most of the electric railroads carried only passengers, but a few began to carry freight as well. They were much more efficient than the steam railroads for short hauls. Sometimes the two kinds of railroads combined their operations. Freight cars, with materials brought in from out of state by the steam railroads, were shifted over to the electric railroads to be carried to their destination at some factory located away from the steam rail line but on a street served by the electric railroad line. In this way the two could work together. You could build a track for the trolley for much less than it cost to build a railroad track. It didn't need to use as heavy rails — the cars were lighter — and you didn't have to buy the land. The trolley line went to the customers, they lived along the streets on which the trolley line ran. The customer had to come to the railroad.

This system of transportation has been so completely replaced by buses in the last twenty years that most young people have never seen a trolley car. In both East Haven and East Windsor trolley museums can be visited by those who wish to see what they were like. The next map shows the distribution of the electric railroads at the time of their greatest extent during the first World War. It should be compared to the map of the railroads.

Ocean Resources

The resources of the sea were used from the very beginning by Connecticut men. It was used as a highway and as a source of food and other useful products, such as whalebone and oil. Throughout the 19th century it continued to be important in the economy of the state, although the way it was used changed. All towns on the coast did not benefit equally from their seaside location, nor did all engage in the same activities. Although fishing boats could operate from almost any cove or river mouth along the shore, the larger vessels which were engaged in trading or whaling needed deeper harbors. Connecticut has a number of these. Those that are important ports today or have been important in our past history are, from east to west: Stonington; Mystic; Thames River, including New London, Norwich, and Groton; Connecticut River, including Hartford and Middletown and other river ports; New Haven; Housatonic River; Bridgeport; Norwalk; Stamford; and Greenwich.



ELECTRIC RAILROADS (TROLLEYS)
ABOUT 1914
after Healy, Kent T

Only the larger towns and cities needed trolley lines. As they grew in size the demand for transportation services between them also increased and the trolley lines were linked together.

Here is an old time whaling vessel roaming the seas in search of whales. One can almost hear the lookout shouting, "There she blows, two points on the lee bow."

Whaling

Beginning in the early days of our history the whaling industry expanded steadily until it reached a peak about the middle of the 19th century. Almost all of the Connecticut whaling vessels sailed from two ports, New London and Stonington. In 1845 New London had 77 ships manned by 2,310 men, and Stonington had almost exactly half as many, 39.

The story of whaling is an exciting one. These ships roamed the seas from the icy Arctic to the palm-fringed South Sea islands searching for whales. Whaling was a dangerous occupation — a gamble with death on the high seas. Many a ship's boat was smashed and its crew killed by the whale they harpooned. The gamble was for high stakes. If the voyage was lucky a man could come home with a fortune. (Every crew member was paid a share of the profits.) If not, he could end up with nothing to show for his year's work. The combination

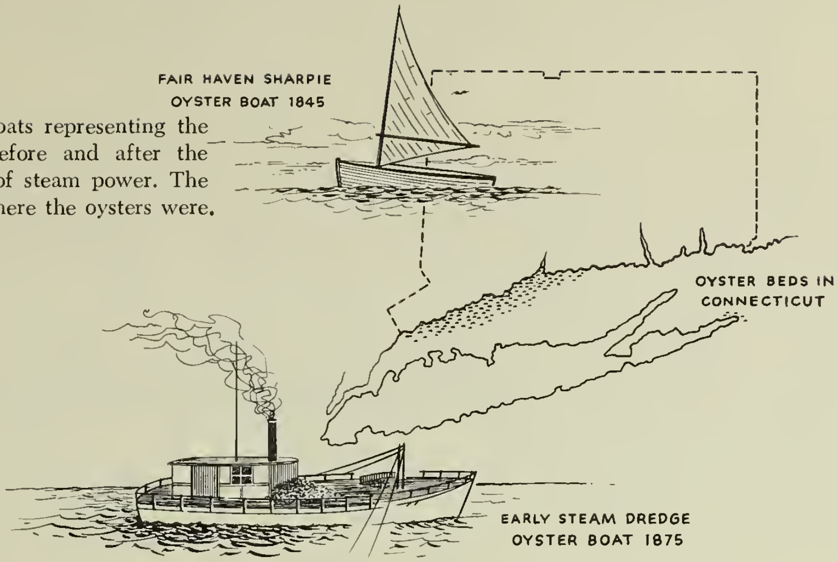
All along the Connecticut coast the small harbors were used by fishermen. The man in the foreground is mending a fishnet.

of danger and excitement, and the possibility of large earnings attracted many of the men of Connecticut. More men signed on as whalers in 1845 than worked in the entire textile industry at that date.

The Civil War marked the end of the whaling industry for most of Connecticut, although whalers continued to sail out of New London in smaller number until the end of the century. In 1889 there were only three whaling vessels in the state. Two factors brought this fascinating chapter of Connecticut's history to a close. Rising costs and lower prices for their products made it unprofitable. And in 1859 Colonel Edwin L. Drake, a New Haven resident, discovered petroleum in Pennsylvania. Kerosene made from petroleum replaced whale oil in the lamps of America. Those interested in whaling may see the last of the whaling vessels, the Charles W. Morgan, fitted out as a whaler used to be, at Mystic Seaport in Mystic. This museum of the seafaring activities of Connecticut history is well worth a visit.

Fishing continued to be important for Connecticut coastal residents throughout the century. In some respects it became even more important. The 143 boats engaged in fishing in 1845 increased to 264 boats in 1889, and the value of the fish caught increased 50% between these years. The average boat was small, and employed about 4-5 men, as compared to the average of 30 aboard a whaler. New London, Groton, and Lyme were all active in fishing. Other coastal towns had a few boats in the activity. Fish taken were mainly cod, mackerel, and shad. The latter were caught in the streams on their annual run during the spring.

The oyster industry was of minor importance until after the Civil War. In 1845 there was a small oyster industry in New Haven harbor employing about 100 men. By 1889 this had increased 10 times and over 1,000 men were employed in the state. Oyster farming became a million dollar business. Oyster shells were planted in shallow water, up to 30-40 feet deep. The baby oysters fastened themselves to the shells and grew. When



Two oyster boats representing the types used before and after the development of steam power. The map shows where the oysters were.

they were about 4-5 years old they could be harvested. The oyster beds were owned by the state. Some were set aside for the general public to use, others were leased out to individuals who raised the oysters. The oyster beds were concentrated in the western end of the Sound from New Haven to Greenwich. East of New Haven practically no oysters were collected. They need water that is not too salty. In the wider part of the Sound conditions are not as favorable for their growth.

Summary

The Connecticut of 1900 had changed considerably. It was now an urbanized, manufacturing state using new power sources. Cities had expanded; agriculture had declined. Sailing vessels were disappearing except as pleasure craft; the steamboat ruled the waters. The first automobile had already been run on Connecticut roads, although no one as yet had any idea of the vast change that it would make in the state. Factory employment was steadily expanding, and new factories were being built in many towns and cities. Along the shore the wealthy New Yorkers had begun to buy up shore front property and build their huge summer places. They were the forerunners of the thousands of people who would make Connecticut in 1960 a vacation land. The inventions that would change Connecticut were being experimented with, or in some cases had already been made. The most significant of these will be described in the next chapter.

TWENTIETH CENTURY CONNECTICUT

CHAPTER 12

TWENTIETH CENTURY CONNECTICUT

The twentieth century is your time: yours, your parents', and perhaps your grandparents'. Everything up to now happened to people you never knew, but what has happened in this century you can learn about first-hand. Some members of your family lived through the events and can tell you what they were like. They can tell you what the early automobiles were like, how the roads were, and how difficult it was to travel any great distance. They can tell you about having their first electric lights and their first telephone. They will remember cooking on wood or coal stoves and buying ice from the ice man. They may remember watching for the trolley snowplows, which were the first vehicles to open up most streets after a snow storm. If so, they may also remember hitching a ride with their sleds on the milk man's pung. This was a wagon on runners that he used in the winter time. After delivering his milk at a house, he sometimes found long lines of children sitting on sleds that were tied up to his pung, waiting for a ride.

The first radios were invented in this period and people used to spend a whole evening listening to the radio, shifting from

Before automobiles became common in Connecticut the roads were not plowed clean. Most delivery people used pungs and often gathered extra riders.

one station to another after each station break. They wanted to be able to boast the next day that they had heard station KDKA in Pittsburgh or some other far away station the previous evening. You yourself can remember the first time you watched television, and how during the first few days your family barely stopped watching it long enough to eat a meal. Some day you will be telling about this experience to your own children. You can also tell about more exciting things, too: watching for Sputnik, or for one of the American satellites; and how you felt when you saw Alan Shepard blast off into space and return unharmed. You may be able to tell about your first airplane trip. When you explain that the plane traveled 300 miles an hour, your listeners may feel just as you felt when your grandparents talked about whizzing down the road on their first automobile trip at the rate of 15 miles an hour.

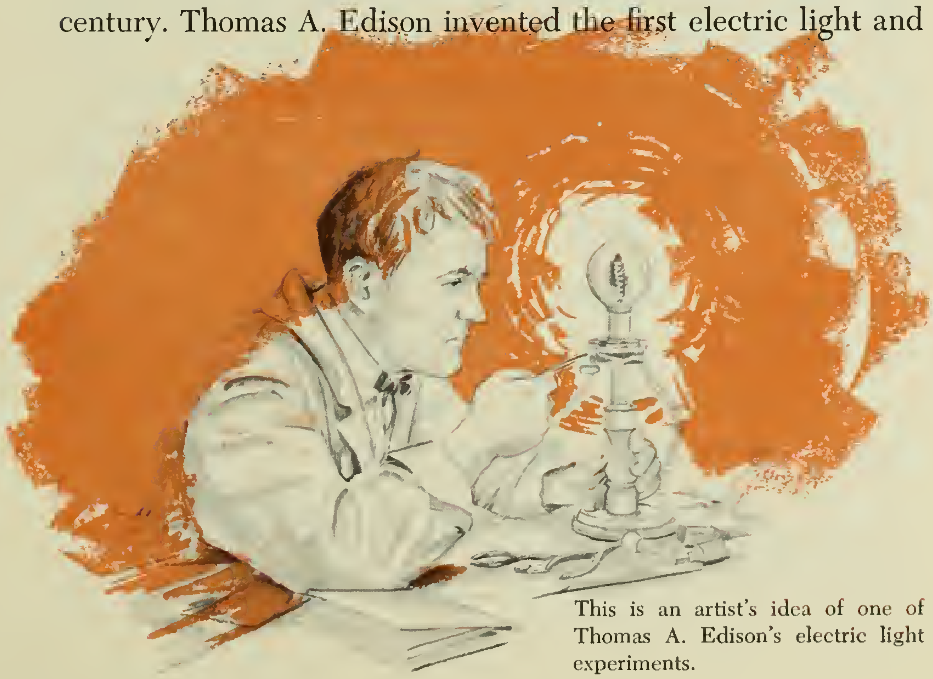
So many new things have been invented in this century that our present day Connecticut is quite unlike the one that existed in 1900. Perhaps the greatest changes have come almost unnoticed as a result of three inventions. Two of these were in connection with new sources of power: electricity, and the gasoline engine; the third was a social invention, the idea of

Perhaps the most important event of 1961 for Americans was the launching of our space ship, the Liberty Seven which carried Alan Shepard beyond the atmosphere.

vacations from work. The three have worked together to move people around in Connecticut, to create new kinds of settlements and to actually reduce the size of some of the larger cities. They have filled the countryside with stores and shops and gasoline stations that are strung out along our roads in a ribbon-like development. They have created a demand for better roads, which today link our cities together with strips of pavement so smooth one can roller skate on them. From the outside, many of our homes look as they did 100 years ago, but inside, even your grandparents might be confused by the new electric machinery that we have developed for lighting, cleaning, heating, cooking, and cooling. The office clerk of 100 years ago would be very lost in a modern office, and the workers of that same day would be unable to understand how many of our present machines run.

Most of the changes inside our houses are so familiar to you that we need not describe them. You can do it yourself if you try to imagine what your house would be like without electricity or oil or gas to burn. The changes in the state outside of our houses may be less clearly understood, and so will be described here.

The development of electrical power goes back to the 19th century. Thomas A. Edison invented the first electric light and



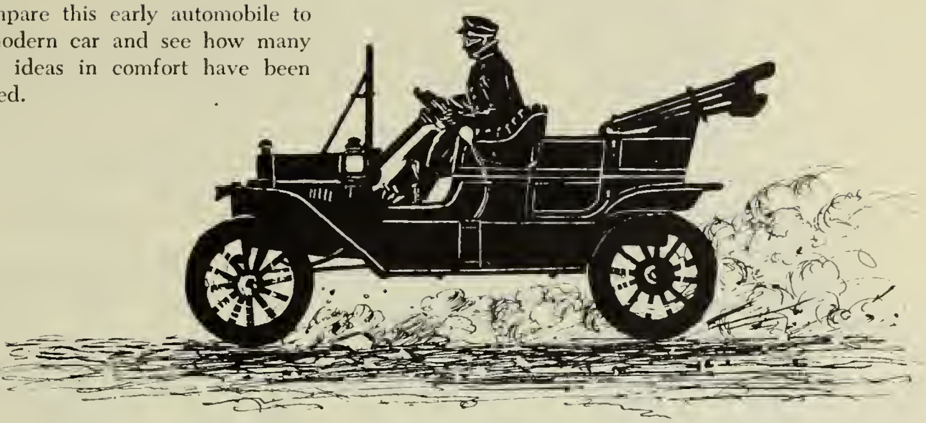
This is an artist's idea of one of Thomas A. Edison's electric light experiments.

set up the first electric power station in New York City in 1882. Within five years several cities in Connecticut began to generate and use electricity. At first it had to be generated and used within a very small area, so each town had its own electric power company. The invention of the transformer in 1885 made it possible to send electric power at high voltages over long distances, then to reduce it down to the voltage used in houses and factories. As was stated in Chapter 11, as soon as electricity became available, it was used to replace the horse cars with trolleys. By the end of the century there were a number of small electric companies in the larger towns. They generated and supplied electricity to the trolley companies, as well as for street lighting and home and factory use. The smaller towns did not have electricity until after the first World War.

The extension of electrical power into these smaller towns had a tremendous effect. Many of them had been unable to develop factories because of the lack of power in their small streams. Steam engines could have been used, but the great convenience of electric power, which could be brought to a site simply by putting in a power line and then routing the power through the plant via other wires to small motors to run machines, made it possible for these towns to attract factories. Two good illustrations of new factories located on sites lacking waterpower are the Sikorsky (helicopter) plant in Stratford and the Electric Boat (submarine) Company in Groton. They could choose their sites with complete disregard of the problem of power production. It is brought in by power lines. No longer is power a major factor in locating a factory.

The invention of the automobile also dates back to the 19th century. Although many men have taken part in its invention and improvement, the credit for the first "horseless carriages" is usually given to the Duryea brothers of Springfield, Mass. A number of the earliest cars were made in Connecticut. In fact, from 1895-1900 The Pope Manufacturing Co. of Hartford was the largest automobile manufacturer in the United States.

Compare this early automobile to a modern car and see how many new ideas in comfort have been added.



Since autos were expensive and not too reliable in the early days, only the wealthier families owned them. Just before the first World War, Henry Ford, applying the ideas that Eli Whitney invented, began to make inexpensive but reliable cars. They were known as "tin lizzies." By 1920, there were more than 100,000 cars in the state. Since then, they have rapidly increased in numbers until today, when there are almost a million passenger cars and over 100,000 trucks.

The automobile impact on Connecticut life has been as great as that of electricity. In the auto, people have a private transportation system of their own. It frees them from having to live near their work. It permits them to travel when and where they wish regardless of the existence of railroads or trolley lines. To an increasing extent, our society today is being built around the automobile. You can eat in "drive-ins" without leaving your car, deposit or withdraw your money from banks, or watch a movie. If you buy a trailer you can even move your house or boat along with you to any part of the country. It almost seems as if we should call our period the "Automobile Age." The gasoline engine, modified somewhat in recent years, has also provided us with the airplane.

The third of the three inventions that have been responsible for shifting people around in Connecticut is the social invention, the idea of vacations. For hundreds and thousands of years people have had holidays when all work ceased. In fact, many years ago in Europe, there were more holidays than we celebrate today. Most of them were associated with the Church. Our ancestors who migrated into Connecticut had broken with that church and gave up those holidays at the same time. Besides, they were so busy creating new farms and a new state that they did not feel they had time for many holidays. They thought one non-working day a week, Sunday, was sufficient. They did insist, however, that all work should stop on that one day. They even penalized anyone who did work on that day.

In the first days of Connecticut's history they did not even celebrate Christmas. It had been too closely connected with the Church that they had broken away from. Later, happily, they did begin to celebrate Christmas. During the first three centuries they added a number of new holidays. Note that with the exception of Easter, Christmas, and New Year's Day, almost all of our holidays are associated with our own nation. Lincoln's Birthday, Washington's Birthday, Memorial Day, Fourth of July, Labor Day, Columbus Day, Armistice Day, and Thanksgiving. Of course Columbus Day is not solely connected with the United States since it celebrates a day important to the Americas as a whole. It became a state legal holiday partly because we had a large number of Italian immigrants. Our celebration of Columbus Day is, in a sense, the result of their pride in him.

Although holidays were celebrated from early in the 19th century there was no thought of vacations. On a farm, vacations were not practical. Animals had to be fed and cared for every day. Schools only ran a few months of the year, not for the purpose of giving the children long vacation periods, but to free them to work on the farm in the periods when everyone's work was needed, at planting or harvesting time. In the villages, stores were open every day but Sunday. At sea, the work on ships went on every day of the week, Sundays included. When the ship reached its home port, the men were paid off. The job was ended until the ship began to refit to set out on a new cruise. The little factories and shops ran continuously as long as they

One of the thrills of life on a farm to a small child was the ride to the barn on top of the last load of hay.

had orders for goods. When the orders stopped coming in the factory was closed down, and the men and women workers were out of a job. Most factories worked less than 12 months of the year. When they weren't running the workers did not get paid. Workless periods meant payless periods; they were not vacations.

The idea of vacations with pay began late in the 19th century and spread during the 20th century. It was first limited to owners of factories and stores. But, once the boss developed the idea of a vacation for himself it was difficult to deny one to his close assistants and later to the other members of his office staff. The factory workers did not get a vacation, at least not one with pay. Since continuous employment was still uncertain for the average factory worker, he was more interested in securing added days of work than in a vacation. Not until he was sure of being able to work all year without being laid off did he really become interested in getting days off. At first the unions got the companies to pay for the holidays. More recently, many of them have secured vacations with pay for their members.

Today most families take vacations, although all people cannot get paid vacations. The type of work many people do prevents it. A doctor, for example, gets paid only when he works. If he doesn't see any patients he doesn't earn any money. A man who owns a store, a laundry, or a bakery is earning only while his shop is open. When he closes it the money stops coming in. Some of these people earn enough so that they are willing to give up a week's income for the benefit they get from a vacation. Since children are usually free of school during the summer months, most families take their vacations then.

On the hottest summer days for many years the firemen have opened hydrants in the city to give the kids a treat.

The summer months in our climate are warm and often humid. In a city the weather is often uncomfortably warm. The brick and stone walls of the buildings and the paved streets soak up heat during the day and hold it at night. Thus many city families seek out cooler regions in which to spend their summer vacations. They head for the seashore or the mountains. Both areas, if you will remember, had been relatively unattractive to our ancestors who had chosen their place of residence for the employment opportunities that were found there. The cool uplands with their many steep slopes had not been good farmland. Nor had the small harbors provided many jobs. Many of the city people now beginning to look for summer vacation spots had left these hill towns or small coastal towns to migrate to the city.

Fathers and mothers have always talked of the fun they had as kids. Those who came from farms spoke of the pleasures of haying, feeding the animals, blueberrying, or swimming in the "old swimming hole." The thought of a couple of weeks back on the family farm and doing all of these things was most attractive to the children. Although Dad and Mother may have left the farm without any desire to go back permanently, they did want to show the children what the old place was like. If they had left a small coastal town, the pleasures and good times that they looked back on were somewhat different and were associated with the water. It was thoughts like these that drew city families back to the Berkshire Hills of Litchfield County or to the shore towns during the early days of this century.

If the family homestead from which they had come was still occupied by members of their own family, they went back for a visit with relatives. If not, the family often looked for another farm in the neighborhood that would take in summer boarders. In the small towns of the eastern and western uplands there was a rapid increase in such farms at this period. People who wanted more comfort than these farm boarding houses could supply looked for rooms at a summer hotel. These, too, were being built in increasing numbers along the seashore or in the hill region. Some of them were quite large and offered all the conveniences of a city hotel. The problem of transportation meant that it was largely those towns that lay on or near the railroads that could benefit from these summer visitors. But, you will remember, most Connecticut towns had railroad facilities by 1900. The trains would be met at the station by horse-drawn stages that took the visitors the last few miles to their summer vacation spots.

Summer people came to the country to enjoy the simple outdoor pleasures. This boy out fishing with his father proudly displays his catch to his mother.

By the time the automobile had become common, more people were earning incomes large enough for them to take vacations. The custom of giving paid vacations had spread to more and more business concerns. The numbers of summer visitors began to rise sharply in Connecticut. With an automobile, even the towns of Connecticut not on the railroad were within reach.

The automobile provided even greater freedom. Fathers could commute on weekends between their city jobs and the summer vacation spot where the family was staying. Nor was there any need to locate in a village near to the stores. With an automobile at hand you could run down to the village to pick up whatever you needed without much trouble. So even the more isolated lakes and uplands were turned into summer resort areas.

Summer residents flocked into the seashore towns and back into the uplands in increasing numbers every year. They quickly bought up all the houses that were for sale, including the abandoned farms. The rest of the newcomers built their own places. Some of these were very large and elaborate buildings — they were called summer estates; but most were cottages that could be built inexpensively, since they were only planned for summer use. In many of the smaller coastal and upland towns the summer population was several times larger than the winter one. Although originally only wealthy people could afford a summer place, rising incomes for all workers made it possible for many people with only moderate incomes to at least rent a cottage for their vacations.

Some of the people who first came in contact with country living during a short vacation came to love it. They began to think, "why go back to the city in the fall? If we could find work up here we could live here all year round." With an automobile at their disposal they could easily drive 20-30 miles a day to work. And the increasing number of factories in these small towns gave them jobs. Electricity and the telephone gave them some of the conveniences of life in a city. They winterized their summer places and settled down as permanent residents. By 1930, all the little upland farming towns that had been losing people every year had reached their lowest point and now began to expand in population. In the next thirty years many doubled or tripled in size. Nearer the large manufacturing towns suburban populations grew even faster. In the decade from 1950 to 1960 the only towns that were not growing were the largest cities. These were actually losing people to the suburbs or to the towns farther away in the country.

Up until about 1920-1930 there had been a steady movement of people out of the smaller towns toward the city. We call this the urban movement. After this date the flow of people was reversed. Today it is the cities that are growing very slowly, or even losing populations, while the small towns are gaining. This change is the result of the three inventions operating together.

AUTOMOBILES AND HIGHWAYS

If you have ever traveled a dirt road in an automobile at a high rate of speed, you can appreciate the problem that the automobile creates for the road. In dry weather there is a long

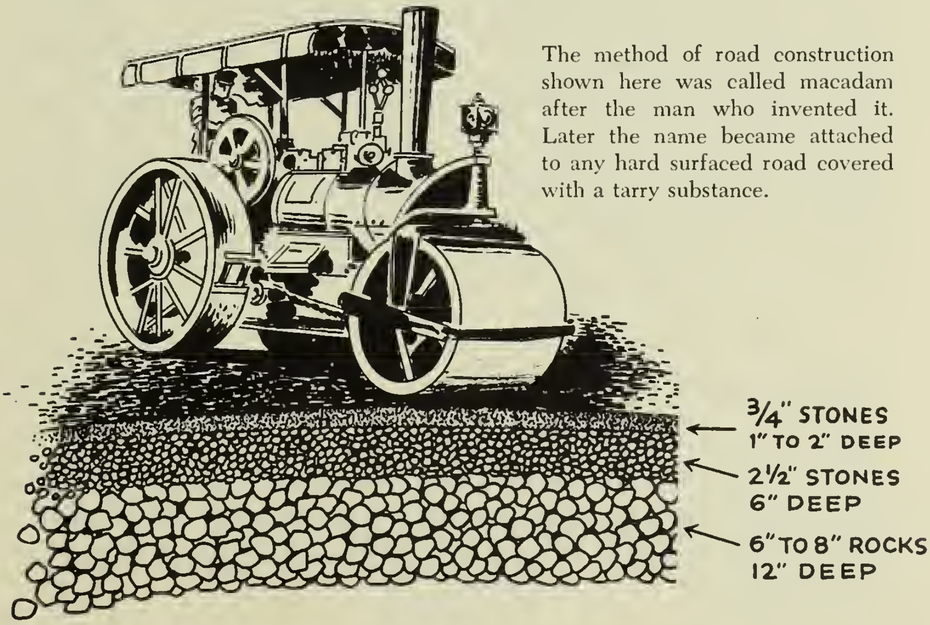
This picture of an early auto shows the problems of motoring in those days. Note the ruts in the road and the way the road has been worn down from the original level.

trail of dust behind you. It is made up of small particles of the road material that is blowing away. In wet, rainy weather the low spots in the road are filled with water. Your wheels passing through the puddles splash mud and water out to the side of the road. If you watch one of these puddles as a number of cars go through it, you can see the hole get deeper and wider. As one road builder put it, "the auto is the enemy of the road, it destroys the road." Of course carts and wagons do the same thing but at a much slower rate.

When the automobile was invented there wasn't a hard surfaced road in Connecticut except for a few city streets. All were dirt, sandy and dusty in dry weather and muddy when it rained. They were in pretty bad condition, although not as bad as they had been in colonial days. The turnpike companies had all disappeared, and the towns were again responsible for maintaining the roads. They followed the system they had used earlier, and the job of road maintenance was generally neglected. Around 1890 the increased use of bicycles had turned some people's attention to the poor condition of the roads. Bicycle clubs were formed that asked city and state authorities to do something about them. The new auto drivers added to the demand for good roads.

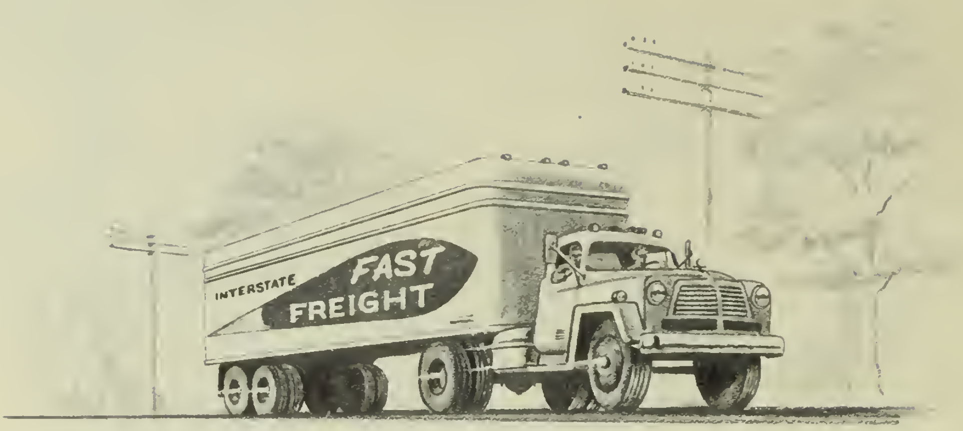
Although we can't go into the mechanics of road construction, it is worth noting that one of the major contributions to good roads was the invention of a rock crusher by Eli Whitney Blake of New Haven in 1858. This made it possible to crush large rocks into small ones all equal in size. These small rocks were laid down, smoothed out, and rolled by a heavy roller until they made a level, firm base. Then the surface material of gravel was put on and rolled to pack it down. For carts and wagons this made a good road, but automobiles destroyed it. What was needed was a hard surface that would last. The first to be used was asphalt. Later experiments were made with cement.

The increasing use of automobiles in the early 20th century showed the need for better roads, at least on the main highways between cities. In 1908 the state took over these main roads and laid out a series of trunk roads, which it agreed to build and maintain. Gradually these roads were rebuilt and covered with hard surface material. By 1920 we had 1800 miles of state highways. Today there are 3,400 miles of hard surfaced state highways and three times as many miles of town roads the majority of which are paved. The needs of the automobile driving public have literally remade the roads of the state.



The method of road construction shown here was called macadam after the man who invented it. Later the name became attached to any hard surfaced road covered with a tarry substance.

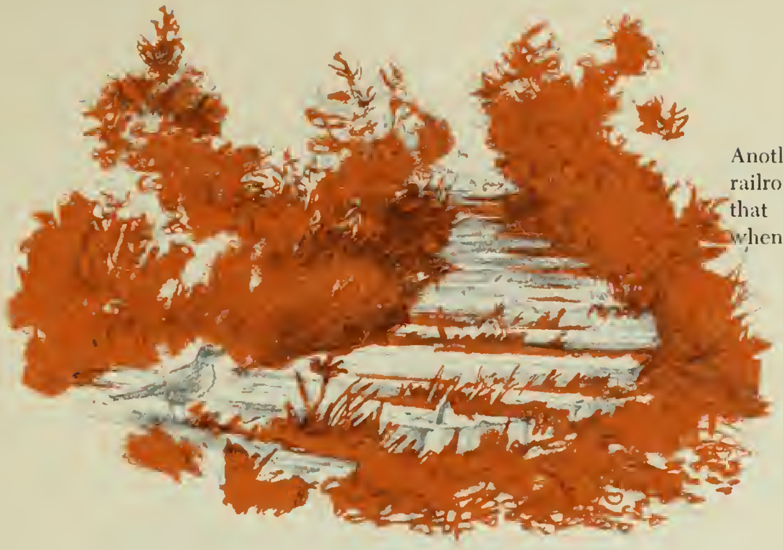
The truck rapidly became a new method of freight handling.



AUTOMOBILES, TRUCKS, AND THE RAILROADS

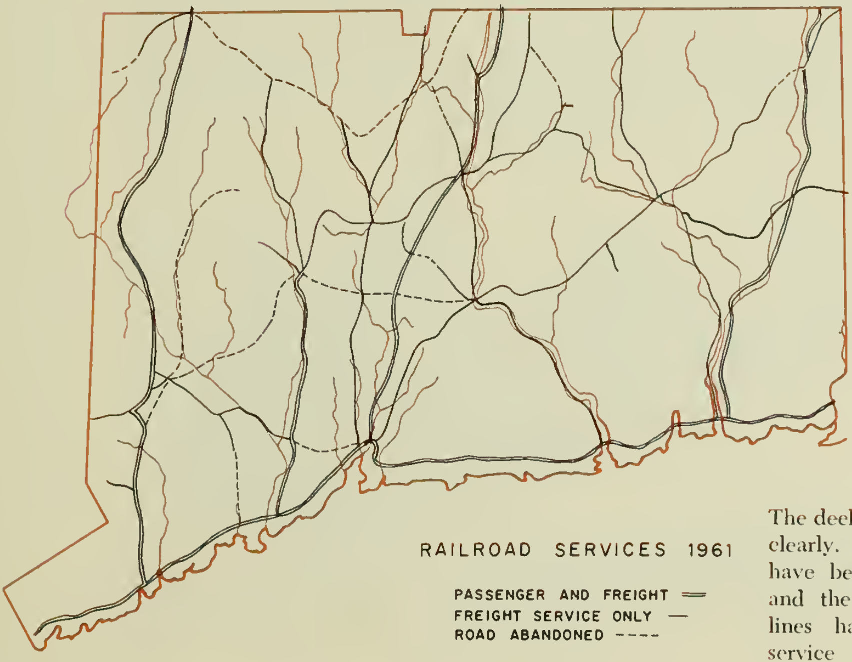
With over one million automobiles, buses, and trucks using the Connecticut highways, the railroads find themselves today in the same situation that they created for the canals and the steamboats. The newer method of transportation has advantages over the railroad, just as the railroad had advantages over the canal. The automobile can carry you to within a few feet of your destination often more quickly than a railroad. And it is available the moment you want it. Once you arrive at your destination you still have this convenient personal transportation at your disposal. With the building of newer and better roads, especially the Merritt and Wilbur Cross Parkways and the Connecticut Turnpike, even long distances are easily covered by car. Families use the railroads less and less. The cost of operating passenger service on most railroads is so high that it is no longer considered to be a paying proposition.

The trucks have also taken freight shipments away from the railroads. They, too, offer more rapid service for short hauls of small quantities of material. There are over 750 trucking companies in Connecticut today. Some of them carry freight anywhere in the country. Although the freight business is still profitable for the railroads, a lot of freight traffic has moved to the truck lines.



Another way to tell an abandoned railroad line is by the wooden ties that are sometimes left behind when the rails are taken up.

The effect of this competition on the railroads can be seen in the rapid reduction of passenger service on our local railroads. In 1914 you could travel as a passenger over every mile of track in the state. Today, many of the lines have suspended passenger service entirely. On other lines the number of passenger trains a day has been reduced to one or two. In addition to the reduction in passenger service, there has been a reduction in freight service. A number of railroads that existed in 1914 have been pulled up, the tracks removed, and the right of way abandoned. All that is left is a cut through the woods, a graded right of way, and a few bridges or tunnels to mark the once busy railroad. The decline in railroading is shown on the next map.



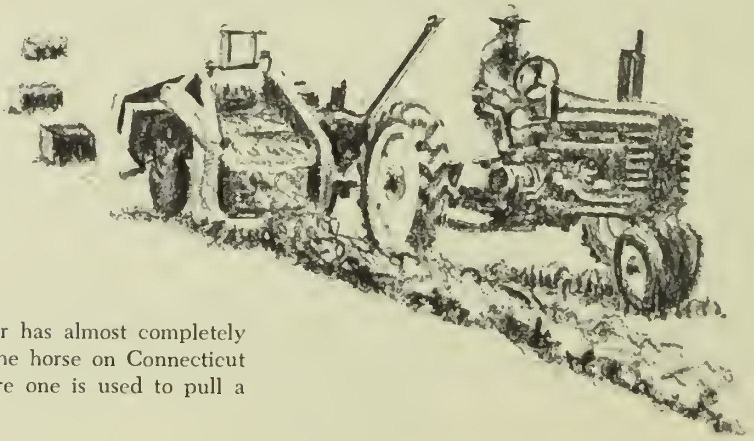
Source N.Y. N.H. & H. R R.

The decline in railroad travel shows clearly. Many miles of railroads have been abandoned completely and the tracks pulled up. Other lines have given up passenger service but continue to carry freight on a reduced schedule.

Note that generally the lines that have been abandoned were the last ones laid down. The Danbury-Waterbury-Middletown line was taken up and so was the line from Hartford to Salisbury. The Shepaug River line never was very profitable and was abandoned. A number of short sections elsewhere have also been given up.

AUTOMOBILES AND AGRICULTURE

The gasoline engine was adapted as a power source for farmers when the tractor was developed. This machine has almost completely replaced the horse on our farms today. Work horses have disappeared from our farms. The state as a whole has only 4,000 horses compared to 46,000 in 1910. Most of the horses we have today are riding horses. The number of farms in Connecticut have been reduced to about 12,000 and every one of the commercial farms has at least one tractor and one truck. The gasoline motor or electric motor has also been adapted to many of the other kinds of work on a farm. For example, all dairy farms have milking machines and most have hay balers. These machines, for those of you who have never seen one, pick up the hay after it has been cut and package it in large bales. Poultry farmers have invented automatic feeders and watering systems for their flocks. Although farming is still not a job for the lazy man, some of the hardest kinds of work have been taken over by machines today.



The tractor has almost completely replaced the horse on Connecticut farms. Here one is used to pull a hay baler.

This very modern airport is the way Bradley Field, our international airport, is supposed to look when it is completed.

AVIATION

Airplanes have changed the face of Connecticut less than the other new methods of travel. But they have changed our ideas on the time involved in traveling. One hundred years ago Connecticut people thought of the west coast as a place that was months of travel-time away. The average person today knows that he can eat his breakfast, drive up to Bradley Field in Windsor Locks, hop a jet plane and be in Los Angeles in time for a late lunch. Flying time is 6½ hours, but the west coast is three hours behind us in time. If you left Bradley Field at 9:00 A.M. our time, it would then be 6:00 A.M. their time, and you would land at 12:30 P.M. their time.

From Bradley Field you can fly to any foreign country. A number of airlines stop there and at our other commercial fields at Bridgeport, New Haven, or New London. Besides these large fields we have many smaller ones that can handle light planes. The state is too compact for there to be much flying between points in Connecticut, but increasing numbers of people are flying from our airports to other American or foreign cities.

As you might expect, Connecticut is deeply involved in the manufacture of aircraft and equipment. One out of every seven factory workers in the state is working for the aviation industry.

With plants like Pratt and Whitney Aircraft, Sikorsky, Hamilton Standard and Norden, all of which are part of the United Aircraft Corporation, we are as well known in this new branch of manufacturing as we were in the manufacture of guns. Both Lycoming engines and Kaman helicopters are made in Connecticut. The skills of Connecticut workmen are also being used today in the newer field of rocket and missile manufacturing.

WORLD WARS

The Spanish American War which we fought in 1898 made the United States a world power. From that date on we were drawn more and more into world affairs. In the twentieth century we grew into the most powerful nation in the world. It was perhaps to be expected that we would be forced to take part in the world wars that came.

World War I was a short war for the United States. It had been going on for almost three years before we came in. Most Americans in those days felt that we should stay out of Europe's quarrels. They thought that the war wasn't our business. Not until Germany began sinking our ships did we join the Allies. For us the war lasted only a year and a half, April 1917 to November 1918. But in that brief period the United States played a large role. The first Connecticut soldiers landed in France in September 1917 and fought in the battles of Chateau Thierry, St. Mihiel, and Meuse-Argonne among others. Over 60,000 Connecticut soldiers served in the armed forces.

World War I did not make the world "safe for democracy." Indeed, in Europe, democracy virtually disappeared in the years after the war. It was replaced by a number of dictators. In 1939 a new Germany, led by Adolph Hitler, broke the peace with an attack on Poland that soon developed into the second World War. This time the United States was drawn in by a treacherous Japanese attack on Pearl Harbor on December 7, 1941. The second World War lasted much longer for us, December 1941 to August 1945. We and our allies had two major enemies on opposite sides of the world to defeat, Japan and Germany. The fighting was almost literally world wide and absorbed the energies of more than three times as many men as had the first World War. Some 211,000 Connecticut men served in one or another branch of the armed services, Army, Navy, Marines, Air Corps or Coast Guard. Over 5,500 gave their lives on the far-flung battle fields. In this war, for the first time women were taken into the armed services to do some of the essential non-fighting work and to free more men to fight. Exactly how many Connecticut women served we do not know, but the number is estimated as more than 5,000.

After the second World War ended we hoped for peace, but in 1950 the Korean War broke out. The Communists of North Korea invaded South Korea and the United Nations voted to send armed aid to the latter country. The United States bore the heaviest burden of this war of all the UN members. However, some fifteen other countries sent military help. The Connecticut share in the American Army was 67,000 men. Not all got to Korea, but they would have if the war had lasted longer.

All three wars had an impact upon Connecticut. As all wars do, they produced a tremendous increase in manufacturing. Many Connecticut companies manufactured war goods, aircraft engines, guns and the like. Far more permanent was the effect felt in the loss in killed and wounded, in families broken and plans disrupted. These losses can never be measured. Connecticut was a different place after each war from what she had been before the war.

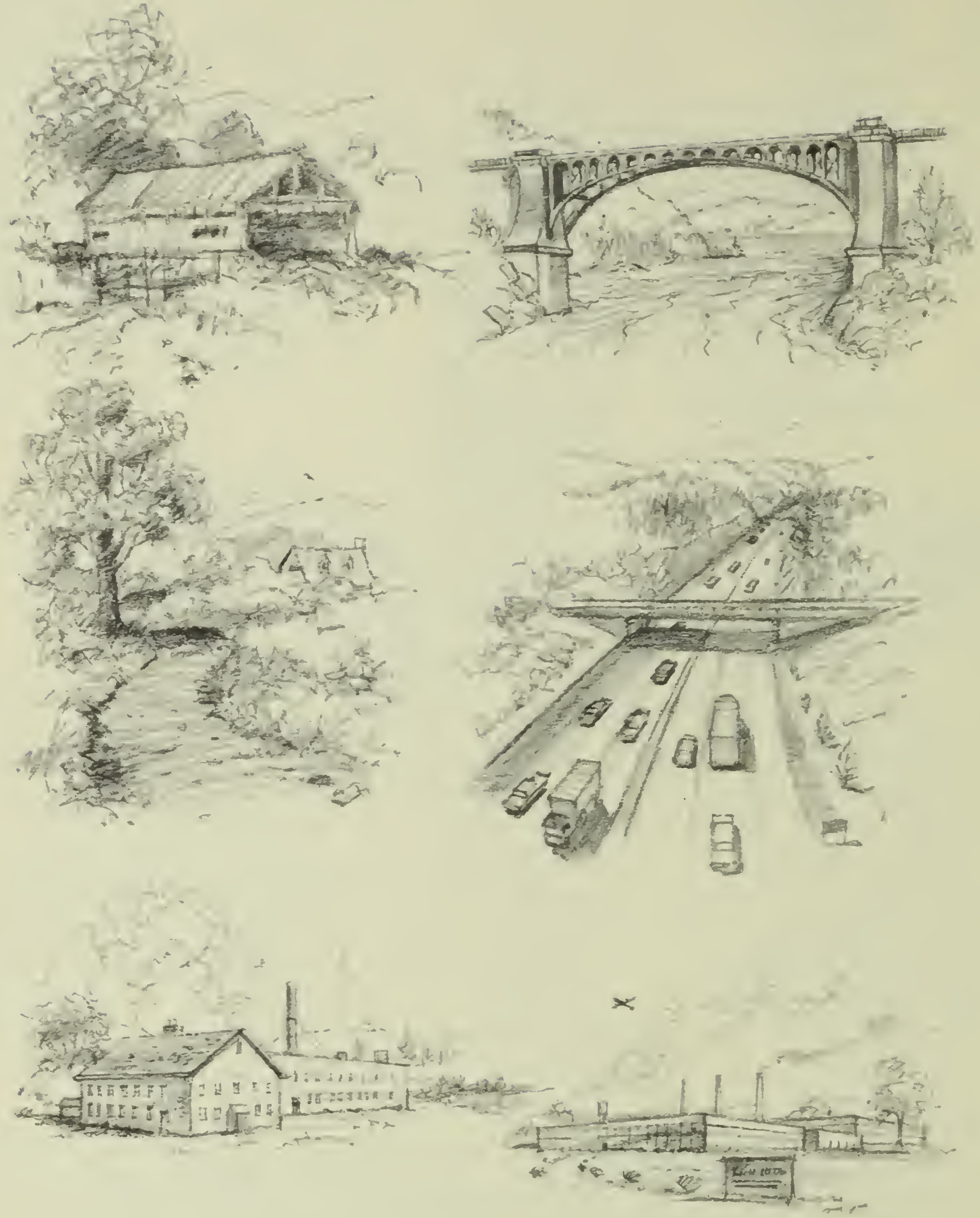
CONNECTICUT'S RESOURCES TODAY

CHAPTER 13

CONNECTICUT'S RESOURCES TODAY

We inherited from the Indians some 5,000 square miles of assorted hills and valleys, rivers and lakes. Originally covered with a mixed hardwood and softwood forest, there were some small areas of grassland. Most of the grassland was salt marsh along the coast, but grasses also covered the floodplains of the rivers. The soils of the state varied in quality. Some were good for agriculture, others were poor. The mineral resources were unknown to the Indians but we found several that proved to be useful for us. With over 8,400 miles of rivers and brooks and 4,000 lakes and ponds there was an abundance of water.

Almost none of the area had been developed when the white man arrived. There were only a few winding Indian trails linking one village to another. Less than one one-hundredth of the state was being used for agriculture. Some of the oyster beds were known to the Indians and were used by them. They also were using the native fish and animal resources. The forest served them as a source of wood that was used for many purposes, as fuel, building material, tools, and weapons. They used stone for weapons and tools, but they used so little that it is difficult to tell where they got it. Here and there are soapstone quarries that may have been originally developed by the Indians. In general, the Indian lived and died without leaving much



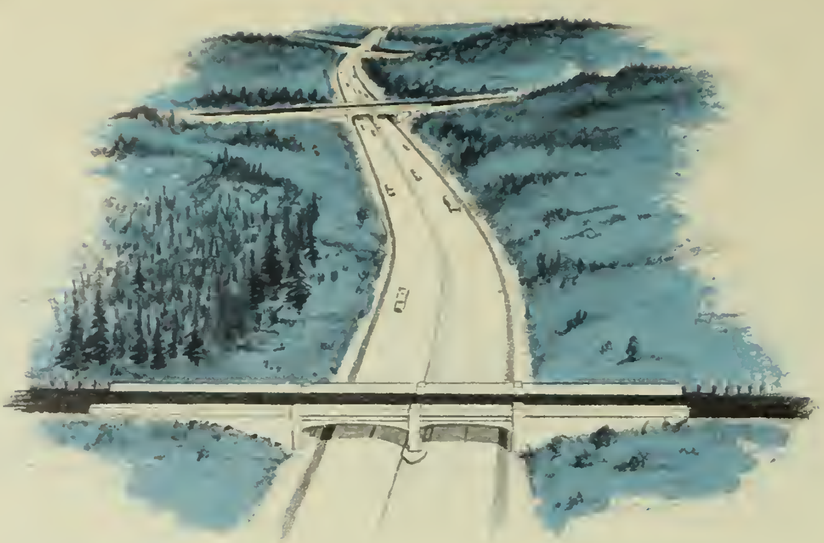
The contrasts that can be seen in the Connecticut countryside between the old and the new are combined here in one picture.

impression upon their surroundings. Within a few years after they disappeared nature covered the few scars with a new growth of vegetation.

In contrast, the white man has used all aspects of his physical environment and has left behind him numerous remnants of his occupation of the land. The land itself thus becomes a museum of our past history. All around us we can see relics of the previous ways that our ancestors have used the state. Often they exist side by side with our present structures. Beside a modern steel, concrete and glass factory can be seen the ruins of one of the old red brick factories of yesterday. Along a modern concrete divided highway we can frequently see glimpses of a narrow, winding, asphalt road built only 20-30 years ago but abandoned last year as not suited to modern automobile speeds and numbers. If you look closely, you may see remnants of the earlier dirt turnpike which the asphalt road replaced. Downstream from a new steel and concrete bridge may lie the stone piers of the old wooden bridge that preceded it. In a few places an abandoned covered bridge still stands, falling into ruin, although the roads leading up to it have been removed.

Virtually every stream in the state is today partially blocked by small cut-stone dams which once backed up the water for a water-powered mill. Sometimes the mill pond is still there. More often it has been filled up with sedimentary materials brought down and deposited in the pond by the river. Where the dam has broken the site of the mill pond appears as a swampy section through which the river winds its way. Close examination of such a site often will show where the mill stood and sometimes what kind of a mill it was.

Through many wooded areas run stone walls, evidence that you are walking through what was once a field. If you explore the area carefully you may find an old cellar hole where the farmer's house once stood. Be careful where you step, because nearby will be a well which supplied the farmhouse with water. Everywhere in the woods you can see stumps which tell of



This modern super highway is designed for safe travel at high speeds. It might be one of our parkways or the Connecticut Turnpike.

lumbering at some more or less remote period of the past. If the stump is not too old, you can tell how old the tree was when it was cut by counting the rings. Most of our forests have been cut over more than once. Here and there a moss covered mound may mark the location of a tree that was cut and used as a mast on a clipper ship, built at Mystic, or perhaps on a whaler sailing out of New London.

Sometimes in the woods you will run across a level, graded section that stretches away on either side in a straight line. This may be the remnant of an old railroad or trolley line. It can be distinguished from an abandoned road which will wind around obstacles, whereas the railroad will cut through them or bridge them. Such abandoned roads or railroad lines make pleasant afternoon walks. The Farmington canal exists today along part of the Canal Line railroad as a grassy ditch. Here and there it is filled with water.

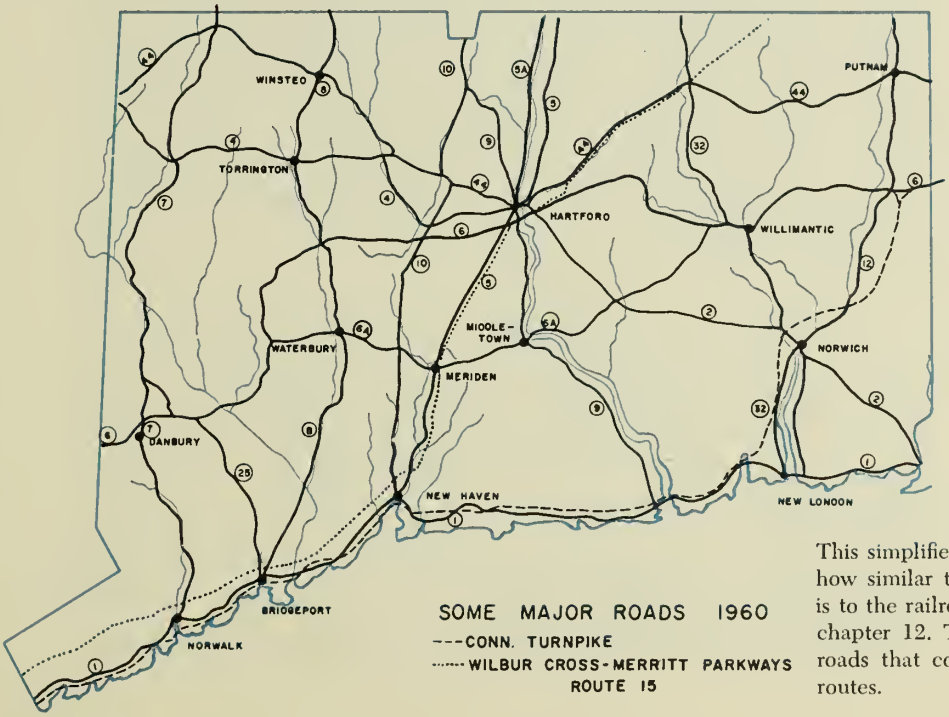
In a number of places in the state piles of broken rock and abandoned tunnels and pits tell of our mineral history. The rocks themselves, or the place names may explain what was dug out. It doesn't take a detective to figure out what was produced near Marbledale in Washington, or at the Ironworks in Brookfield, or at Lime Rock in Canaan, or at Granite Bay in

Branford. You do need more information to learn what was produced at Mine Hill on the Roxbury-New Milford line, or at Old Quarry in Guilford. If you are energetic enough you can often trace the track leading from the mine to where the mineral was processed. Here you may find a large stone structure, a blast furnace or a lime kiln.

All of these are relics of the past and are no longer important today. In this chapter we are interested in showing how Connecticut's resources are now being used. A geographer arranges these resources under a series of headings: landforms, climate, water, vegetation and animal life, soils, and minerals. Each of these affects our lives and each will be described here.

LANDFORMS

You learned about Connecticut's landforms in Chapter 1. In each of the later chapters the way they influenced man's use of the land was discussed. They are still important, although they are no longer the obstacles to movement they once were. Autos can climb quite steep grades if they need to, but road builders prefer the more level routes. If you look at the map you will see that most of our main roads still follow the river valleys. Each



This simplified road map illustrates how similar the main road pattern is to the railroad network shown in chapter 12. There are many other roads that connect up these main routes.

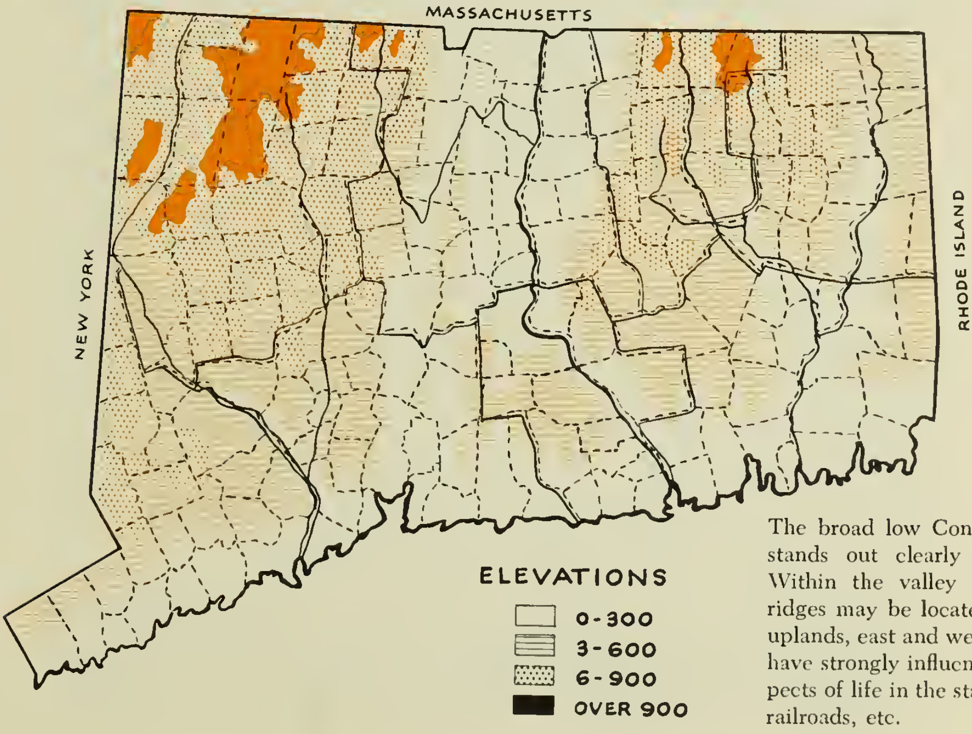
of our main river valleys has its road and sometimes two, one on each side of the river, as well as its railroad. Our population, since the beginning of the manufacturing period, has tended to concentrate in the valleys. Since roads are built to connect groups of people it is natural that they would run through the valleys.

The roads that do not follow the valleys have been built to connect cities that lie in different valleys. For example, any road linking Waterbury, Meriden, and Middletown has to cut across country. Where such roads cross the hills they take the easiest routes, through the low points — the passes. Rarely does a road charge directly at a hill. Usually it climbs it on a long slant. Our express highways, the two parkways and the Connecticut Turnpike also cut across country. In building them, as you have probably noted, the hills are cut down and the low points filled in to reduce the grades necessary. Wherever possible these roads, too, take a level route. One major reason for building them both was to connect the important cities of Boston or Providence, and New York. This was, if you recall, one of the reasons for building several of our railroads where we did. One other reason for building railroads was to make travel easier to and from certain parts of the state. This reason lay behind the route taken by the Connecticut Turnpike in eastern Connecticut. With faster travel possible between eastern Connecticut and New York via the Turnpike, we hoped that new manufacturers would locate in the upper Quinebaug Valley to replace some of the textile mills that were leaving.

If you compare the railroad and road maps you will see a remarkable similarity of pattern. When you think about it, however, the similarity is not really astonishing. Both methods of transportation are attracted by cities and will try to avoid hilly regions. As the railroads tended to follow some of the old turnpike and canal routes, so do present roads parallel the railroads. Our landforms still strongly influence our transportation routes. The map (page 259) shows some of the major roads of the state.

Landforms also influence the distribution of farmland. Level land has always been preferred to sloping land for crops. The Connecticut people only cleared sloping land under the pressure of increasing numbers of people. Less than 10% of our land is today being used for crops. Most of this is level or gently rolling land. The increased use of farm machinery makes levelness of the fields more important today than when we did most of our farm work by hand. As you travel through the state, note that row crops, like corn or vegetables, tend to occupy the flat land. Hay can be planted on sloping land since the grass cover will prevent erosion. The steepest slopes are used for pasture if they are used at all in farming.

All parts of the state have some level valley or hill-top land, so farming will be fairly evenly distributed around the state. The central valley has more flat land than do the eastern and western uplands. Tobacco farming is concentrated in this valley. The reason is partly the levelness of the land and partly the type



The broad low Connecticut valley stands out clearly on this map. Within the valley some traprock ridges may be located. The higher uplands, east and west of the valley have strongly influenced several aspects of life in the state, settlement, railroads, etc.

of soil found there. Unfortunately, from the point of view of the man who wants to farm, level land is just as desirable for house and factory sites as it is for farming. These other uses often outbid the farmer for the land. Around all of our growing towns you can see good farmland being cut up for building lots. One authority estimates that we are losing 5,000 acres of farmland each year in this manner. This problem will be considered in more detail in the next chapter.

CLIMATE

The climate affects many things in our lives. We all know that we dress to fit the weather. We wear completely different clothing in the summer from what we wear in the winter. There are a number of special types of clothing that have been invented to protect us against different weather conditions such as rubbers, overshoes, rubber boots, raincoats and hats, snowsuits, gloves and mittens. Houses, too, in Connecticut must be constructed with a view to the varying weather conditions. Roofs must be built to resist snow and rain. Note that most of our roofs are sloping. Our winter snowfall is heavy enough so that unless the roof slopes to permit it to slide off, the roof may break. In parts of our country where the snowfall is less or lacking entirely the roofs need not be sloped as much. Of course you can build a roof strong enough to support the snow, but this means heavier and more expensive beams and walls.

Have you ever noticed that in our countryside many of the old farmhouses have a connecting barn? Between the house and the barn are a series of sheds all connected together. This type of structure is almost unique in New England. It permits the farmer to go from the house to the barn without going out of doors. When you have to take care of animals several times a day, it is a real convenience in the winter not to have to wrap up in outdoor clothing before going to the barn.

Several of our major sports originated in the north and the seasons in which they are played are adjusted to the climate conditions of this region. Football stops about Thanksgiving

This house and connecting barn is a relic from an earlier period of Connecticut's agricultural history when all farmers kept and had to take care of animals.

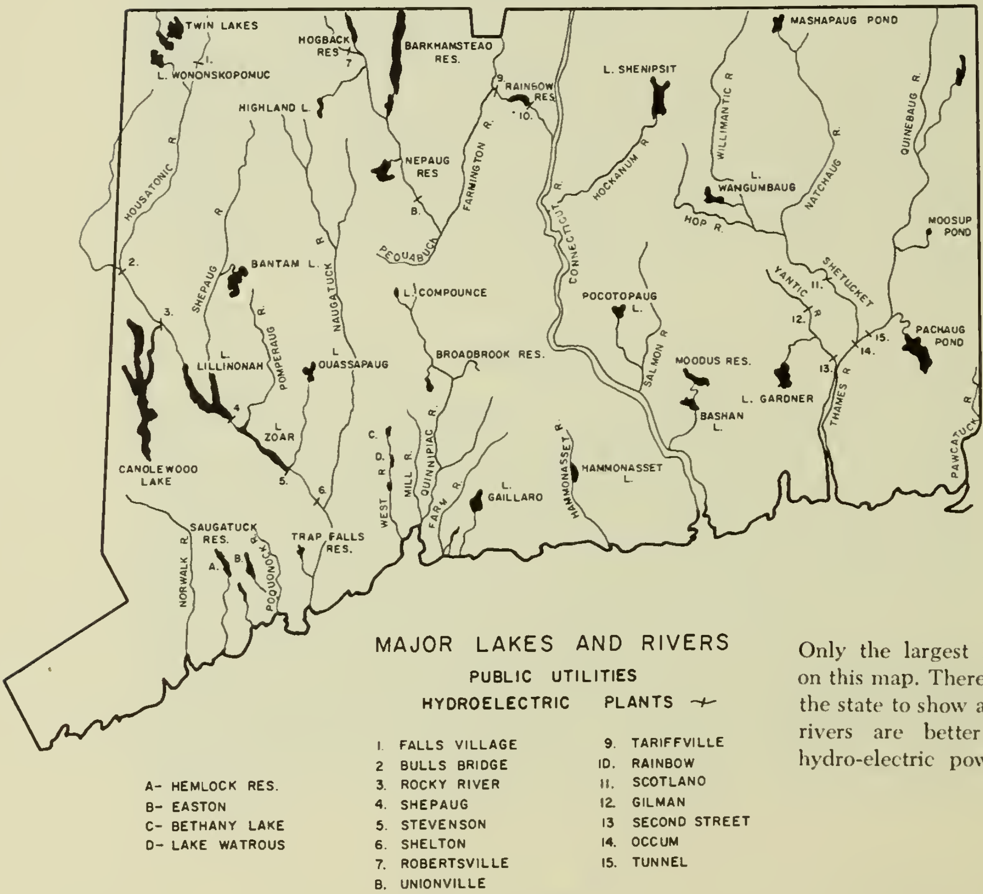
throughout most of the country. It stops simply because after Thanksgiving the ground in this area is often frozen. Any of you who have played football will understand why it is not a good sport to play on frozen ground. Baseball can be played in any season, but fairly warm weather is most desirable. Thus it starts in the late spring and goes through to early fall. The winter weather conditions in the north are so uncertain that a game that can be played indoors is best suited to the climate. Thus basketball was invented. In general, schools elsewhere in the country follow this schedule even though there are no climatic reasons for them to do so.

WATER

Connecticut is blessed with an abundance of water. We have an evenly distributed, moderate amount of rainfall. As a result the only times we are really concerned with water is when we get too much or too little. An extra heavy rain may cause a flood on our rivers and do damage to our towns. A long dry spell worries our farmers and the people who run our city water supply systems. To the rest of us a long dry spell in the summer merely means a long series of ideal summer vacation days. A heavy rainstorm, unless our homes are near the rising river, means that we are cooped up in our houses and have to change our planned activities. We go to the movies or watch television instead of doing something out of doors.

Although we may not think much about them, the water resources of our state are very important and quite completely used. We have two types of water resources, surface water in rivers and lakes, and ground water. Of the rain that falls, about one-half runs off through the rivers into the Sound, one-fifth enters the ground and moves downward until it reaches the water table, the balance is evaporated into the air. The first two forms are used by man, while the third replaces some of the water in the air which may later fall again as rain.

The more visible forms of water, the surface waters of our lakes and streams are used in several ways. Some of the lakes have been set aside to serve a single purpose, others are used in more than one way. A number of natural lakes are used only as reservoirs to store water for human consumption. In addition, several of the largest lakes we have were created by dam-



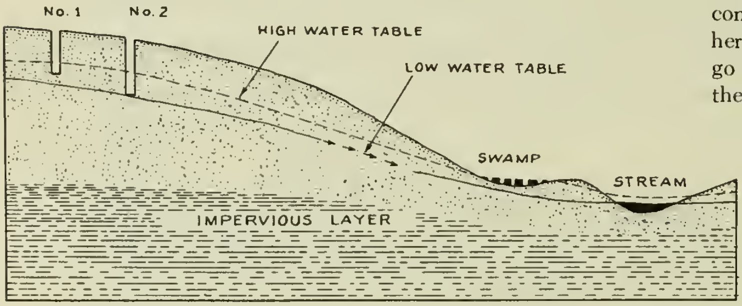
Only the largest lakes are drawn on this map. There are too many in the state to show all of them. Some rivers are better developed for hydro-electric power than others.

Shepaug Dam, a modern hydro-electric plant produces power much more efficiently than the old waterwheels.

ming up small river valleys to make such storage places. A few of the larger ones are named on the next map, among them are Barkhamstead, Nepaug, Saugatuck, and Trap Falls reservoirs and Gaillard Lake. There are many smaller ones since 39 of our cities depend upon this form of water for their water systems. Each of these cities has at least one reservoir, and some have several.

The second way we use surface water is for the production of hydro-electric power. Water wheels have virtually disappeared from the state, but we still use the power of falling water by converting it into electricity. There are far too many small hydro-power developments in individual industries to be able to show them on the map. The larger developments of the public power companies are so shown. There are 15 of them: 6 on the Housatonic, 4 on the Farmington, and 5 on tributaries to the Thames. On the Housatonic, three lakes have been backed up by dams and water is stored until it is needed to make electric power. All three of these lakes, Candlewood, Lillinonah, and Zoar are also used for recreation.

Recreation is perhaps the most widespread of the uses of surface water. Almost every lake or pond, except those reserved for water supply, is used for fishing, boating, water-skiing, and swimming. Many of the larger ones have their shores lined with summer cottages. Where they lie near the industrial cities some of the houses have been winterized and are lived in all year round. The lower portions of the large rivers are also used for transportation. Unfortunately, pollution by industrial and household wastes has destroyed the value of many streams for either fishing or boating. Transportation of sewage has long been considered one of the uses to which we could put running water. If there isn't too much sewage little harm is done, since the river purifies itself in a few miles. Our dense population has created a major problem here. We produce too much sewage to permit it to be dumped directly into our streams. In recent years sewage disposal plants have begun to solve this problem. This is another problem that will be considered in the final chapter.



The rise and fall of the water table, which occurs with wet and dry conditions, is indicated clearly here. With a low water table wells go dry, swamps dry up, and even the level of water in the rivers sinks.

The second type of water resource, ground water, is of primary value for our vegetation, both natural and cultivated. Part of the rain that falls enters the ground and seeps downward until it reaches the water table. This name refers to the top level of the part of the ground that is filled with water. In many parts of the state it lies only a few feet below the surface. If there is an open well on your land you can see it. The water level in the well shows where it is. The water table rises and falls during the year. In the spring it is at its highest point and gradually drops in the summer and early autumn. The water in the ground is tapped by wells to provide a water supply for many people in the state. Some of these wells are very large and produce enough water to supply a small city, others are small and supply only one house. Many factories that use large quantities of water drill their own wells rather than buy water from the city.

The vegetation draws upon the water in the ground that is in the process of seeping down to the water table. Only a few large plants, some trees, have roots long enough to reach the water table itself. In rainy weather there is always sufficient water moving through the ground to provide plants with enough to drink. When we have a drought the supply of water within reach of the plant roots becomes too small to support life in the plants and they wither and die. Only the deep rooted plants can survive. Normally we do not have long enough dry periods to kill our plants. But we do have short dry spells that slow down the rate of growth in plants. You may have noticed this on your own lawn. In dry weather it does not grow very fast and you may be able to skip giving your lawn its usual weekly trim. Farmers try to keep their crops growing through a dry period by watering them from a nearby pond or river. You yourself may do the same thing for your lawn. If you do water your lawn, don't just sprinkle it, give it a good soaking (except when there is a water shortage) so that the water will penetrate down into the ground where the plant roots are.

VEGETATION

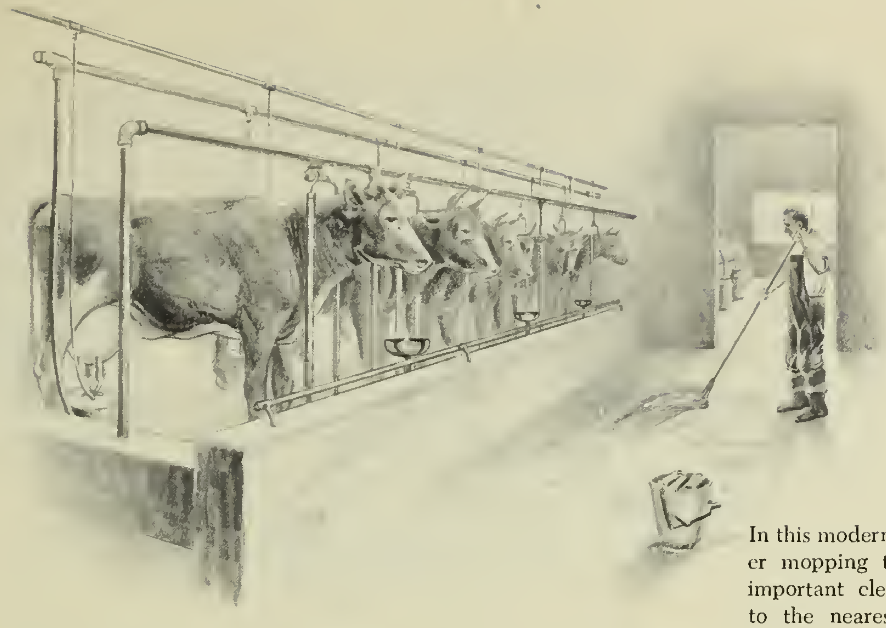
Man's first reaction to the natural vegetation of Connecticut, the forest, was an attempt to get rid of it as quickly as possible. Later, as the need for wood increased, the forest became a resource. Long before the 20th century came, the virgin forest had disappeared except for small pieces here and there that escaped the lumberman. By 1900, lumbermen had begun to cut the second growth woodland. Today 70% of our state is covered with woods, most of it quite young and not too valuable for lumber. Foresters estimate that the present forest has only about one-fiftieth of the wood that it had in 1630. Fortunately, many of the forest owners are well aware of the situation and are trying to improve their forest stands. Our forests are growing five times as fast as they are being cut. This means that eventually we will again have a forest resource that will be of value to the people of Connecticut.

Although our forests are not too valuable today, they are being used. Lumbering goes on in many of the forests and we produce today about 15 million cubic feet of lumber a year. Our forests are used in several ways besides being a source of lumber. The water companies of the state own hundreds of thousands of acres of woods around their reservoirs. This is used to protect the purity of the water. The state owns about 150,000 acres in state forests and parks. These are used partly for recreation but also as timber sources. The forests serve us today as game preserves, water supply protection, and for recreation, as well as growing into a source of lumber for the future.

SOILS

The quality and distribution of Connecticut's soils has already been described in Chapter IX. Here we will just consider the importance of agriculture in the state. Although the numbers of farms has declined and the acreage devoted to farm use has also decreased, the value of the farm products is higher today than it has ever been. Our farms provide us with a large fraction of certain of the foods that we eat. Milk, eggs, poultry, potatoes and vegetables, and certain fruits are raised in large enough quantities so that we can almost feed ourselves; most other foods we must import.

Our failure to grow more of these foods is not because we have very poor farm resources. From the point of view of having sufficient good land we could easily double the amount of food we raise. All of you who live in the suburbs or in small towns know of land near you that could be used to raise crops that is no longer being so used. There are a number of reasons: low prices for agricultural products, high wages for workers, high costs for agricultural machinery, high taxes on agricultural land, more attractive types of jobs nearby, and other uses for farm-



In this modern dairy farm the farmer mopping the floor shows how important cleanliness is. Attached to the nearest cow is a milking machine.

land – as home or factory sites. All of these things have turned people away from farming in this state. Other states can often produce the same things more cheaply than we can. In our system of economy the areas that have the best resources for producing something do so and sell their products to the rest of the country. So we buy vegetables and fruits from New Jersey, or Florida, or California. In turn we sell them the manufactured goods that we produce.

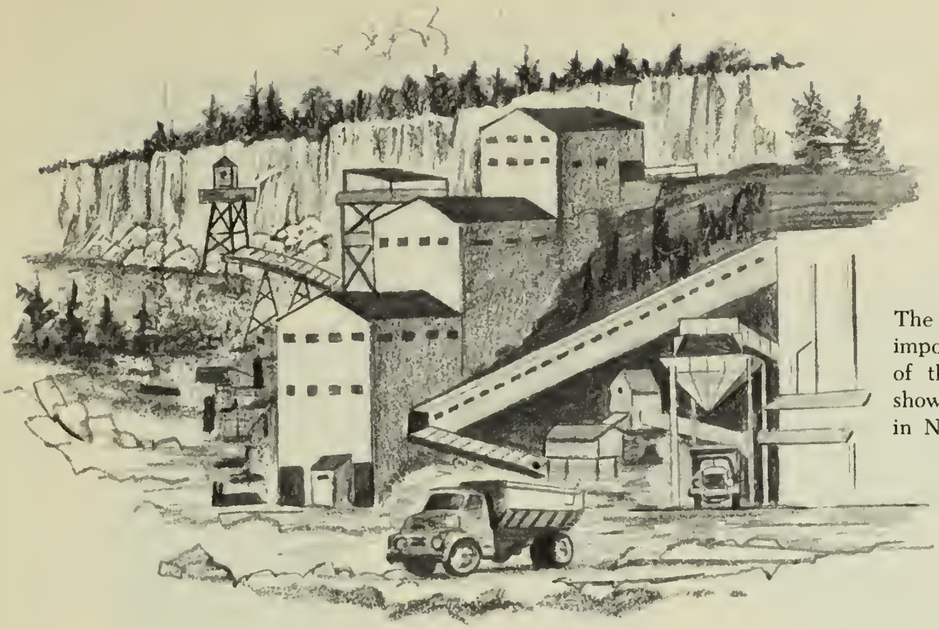
Farming today has become as specialized as manufacturing. Whereas, in 1850, all farms tended to produce the same things and have the same kinds of livestock on them, today a farmer concentrates on raising one crop or product and buys what else he needs for food as the rest of us do. We classify farms as dairy, poultry, vegetable, fruit, or field crop farms. Almost one-half of Connecticut farms are dairy farms, one-third raise poultry, and one-tenth raise tobacco. Each of the several counties seems to concentrate on one or two types of farming. For example, Litchfield is a dairy region with seven out of every ten of her farms producing milk. The tobacco farms are almost all in Hartford County, and New Haven has about one-half of the vegetable farms. Most Windham and Tolland County farms raise poultry and eggs. The other three counties are evenly divided between dairy and poultry farms.

In summary we can say that Connecticut is using most, but not all, of her best soils for agriculture. The farms are distributed much as you would imagine they would be. The hillier regions follow types of farming that are not especially affected by their hilly character. The pasture and hay crop types of land use can be carried on in a hilly region. A poultry farm needs little land; this may be level or sloping, it doesn't make much difference. The field crops of tobacco or vegetables are concentrated in the more level portions of the central valley in Hartford and New Haven counties.

MINERAL RESOURCES

Mining for metals has long been abandoned in Connecticut. The copper ores were soon used up in Connecticut, we have no more copper. Iron mining stopped for several reasons. Our deposits were small and it was costly to dig the iron ore out. Charcoal became expensive and we had no coal to substitute for it. Out west a very large iron ore deposit, the Mesabi range was discovered. Connecticut iron mines could not compete with the cheaper ores of this range. The other metals that were mined in a small way in Connecticut were never very important. One other type of mining, marble quarrying, which was important in some towns for a short period, has also been given up for the same reason that iron mining declined, competition from other sources.

We still have some minerals that are dug out and used. The most important of these are traprock, clay, and limestone. Traprock is found in a series of ridges throughout the central valley. At a number of locations along these ridges there are huge quarries where this rock is blasted out, broken up and sold as road material. Since the rock is quite hard it makes an excellent foundation for a road. One of the larger companies in this activity advertises that it is, "the business that began 200 million years ago." This was the approximate date when these rocks were laid down in the state.



The quarrying of traprock is an important industry in some towns of the central valley. This scene shows the quarry at Totoket Mt. in North Branford.

Clay is also found throughout the central valley, and in other valleys as well. The main deposits of clay were laid down at the end of the glacial period on the bottom of the great lakes that filled the entire central valley from New Haven north through Massachusetts. The clay is dug out, mixed with sand, then baked in huge kilns that make a million bricks at a time. Most of our brick buildings are made from these bricks. The brick companies might advertise that their business started some 10,000 years ago. The third of the major minerals used in Connecticut is limestone. The limestone and marble rocks, the latter is merely a changed form of limestone rock, are quarried and ground down to powder size, packaged and sold. The two main uses are in agriculture and for construction. These rocks are located in the western part of the state, primarily in the Housatonic Valley but extending south to Danbury. The lime companies are also concentrated here. A few other minerals are dug out in smaller quantities, feldspar and mica are the most important today. Sand and gravel, used largely in building roads, are produced in huge quantities in most parts of the state. You can see the sand pits all over the state wherever the rivers flowing from the glacier dropped their loads of material. They are concentrated in the valleys but small deposits may be found in the hill towns too.

Many, many years ago when pirates or armies captured a city they searched it carefully for gold, silver, and precious stones that they could carry away as loot. Today the most valuable loot consists of machinery. With it you can make almost anything you want. In this sense Connecticut is one of the richest parts of the world today. It is crammed full of machines of many sorts. We have thousands of factories that make thousands of items to sell to the world. If I were a pirate looking for a country to loot, I would choose Connecticut.

In the past three hundred and more years our ancestors and ourselves have created in this state a tremendous resource. We have taken the raw material, the land, which was producing little for the Indians besides a few thousand bushels of corn and beans, a lot of lumber, and a small number of wild animals, and made it produce abundantly. A large share of the wealth that the state presently produces comes through manufacturing. Our 4,600 factories add over $3 billion dollars of value to the raw materials they use. The economic phrase, "value added" may be explained best by a simple illustration. If you pick up a piece of wood in the forests it has, perhaps, a value of ten cents. Suppose then that you take this piece of wood and work on it to change it into a baseball bat that you sell for $2.00. The difference between the value of the raw wood and the bat is $1.90. This is the value you have added by your work.

The 4,600 factories in Connecticut and their machinery make up the most valuable resource that we have. Of course the factories themselves without the men and women to work in them are much less valuable. So we must add to the factories the more than 400,000 workers who run the machines. Anyone who has read this far in this book will have a very good idea where these manufacturing plants are located and what types of factories are important. The top ten cities have over one-half of all manufacturing — but they are not the same cities that were the top ten in 1850, or even in 1900; there have been a number of

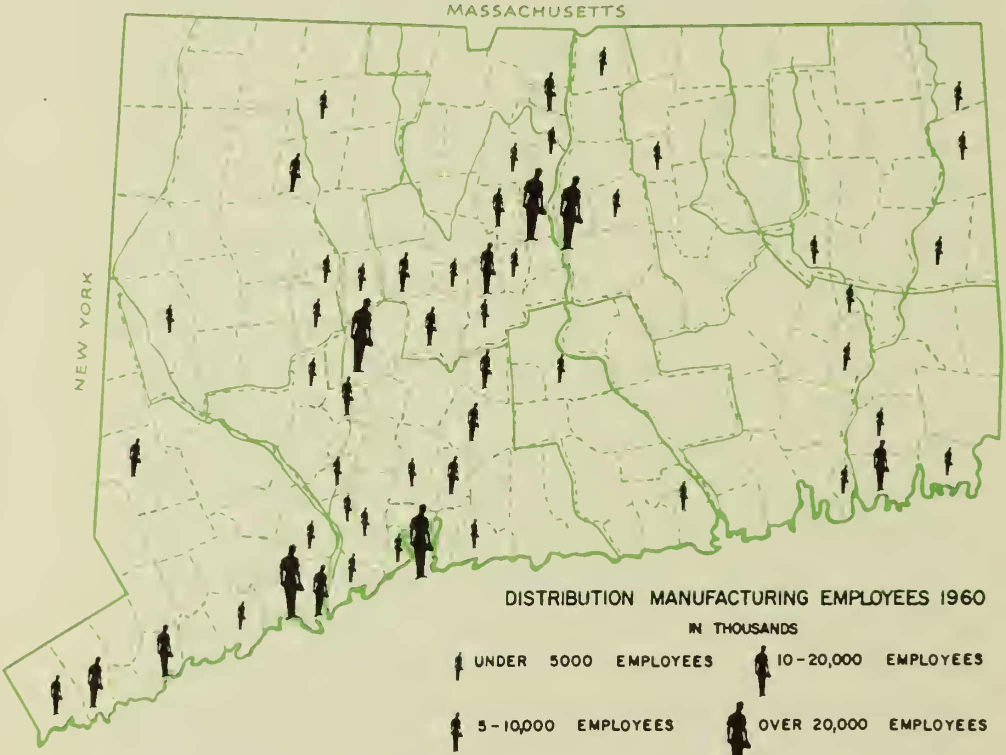
This workman has the power of several hundred horses at his fingertips in the machine. It is a band saw especially designed to shape pieces of metal. Note his safety goggles to protect his eyes against flying chips of steel.

changes. East Hartford, Stamford, Stratford, Norwalk, and Groton have displaced the cities of New London, Norwich, Middletown, Danbury and Meriden. Our largest cities: Hartford, New Haven, Bridgeport, Waterbury, and New Britain, however, are still among the most important manufacturing centers.

There has also been a change in the types of manufacturing from what were important in the earlier years of our history. Some of the early types remain but are relatively less important because of the rise of factories making things that didn't even exist at the earlier date. In 1850 the industries employing the largest number of workers were textiles, iron, hats, wood products, paper, clocks, brass and copper, hardware, and machinery. By 1900 the metal industry had overtaken textiles, which remained a strong second. The brass industry had risen to third place. Paper and vehicle manufacturing were a poor fourth and fifth respectively. Today the new industry of transportation equipment (aircraft) is first, machinery and fabricated metal products are second and third, and electrical machinery is fourth. Textiles have dropped to ninth place. The brass industry remains strong. It is now included with new metals such as aluminum under a general heading of primary metals and is our fifth ranking industry. Connecticut continues to be famous for her manufacture of guns, silverware, and clocks.

Perhaps the clue to why Connecticut has remained an important manufacturing state, although we lack most of the raw materials that are used in manufacturing, lies in the willingness of Connecticut men and firms to experiment with new ideas. You will recall that one of the reasons we became important was because of the inventions of Connecticut men. Of the more than 400,000 men and women working in factories today, about one-half are working with materials, plastics or metals, that didn't exist 50 years ago, or are making machines that were not invented until the twentieth century. As other new inventions come along, Connecticut men will be among the inventors and Connecticut factories will be set up to manufacture the new things. Our ability to adjust in the past makes us confident of our ability to adjust to the future.

The distribution of manufacturing in Connecticut is shown in the next map. All of the towns with over 1,000 workers in



The concentration of manufacturing in certain towns and cities shows clearly in this map. Some of the other towns may have one or two factories at this date.

manufacturing are shown. They account for 95% of the manufacturing in the state. Note the very heavy concentration in three counties, Hartford, New Haven, and Fairfield, which together have three quarters of all the factories. This map should be compared to the other two maps of manufacturing, for 1845 and 1900.

SUMMARY

One could summarize Connecticut today in many ways. Perhaps the most appropriate way is to paraphrase Daniel Webster and say, "It is a small state, but there are those who love it." Connecticut has a number of firsts to her credit, but any state, by choosing carefully, can claim some firsts. More important than the fact that Eli Whitney or John Fitch happened to be born in Connecticut is what the people of Connecticut have done with the ideas that these men had. We have taken the ideas and developed them and with them have created an environment that is good to work in and good to live in. Connecticut has 55 manufacturing towns, but it has 114 towns without many factories that are also good to live in. The Connecticut people over the past three hundred and more years have done much to build our state. What is perhaps even better is that they have left much for us to do. The final chapter will take a look into our future.

THE FUTURE OF CONNECTICUT AND ITS RESOURCES

CHAPTER 14

THE FUTURE OF CONNECTICUT AND ITS RESOURCES

The future of Connecticut, indeed the future of our entire country, is in your hands. Our ancestors and the adults who presently live here have made Connecticut what it is today. Some things we have done well, some we have done poorly, and many things we have left undone. These tasks will be yours; to continue the good things, to repair the mistakes we have made, and to take up the jobs we haven't tackled. In this work there is a place for all of you, a need for many different kinds of skills. You are now preparing yourselves for this work.

Among the things we have done well is to develop the resources of the state. Today the resources are well known and most of them are being used, although some are not being used to capacity. We have unused waterpower, there is still iron ore in Litchfield County, much of our agricultural land is producing below capacity. Manufacturing has been developed to a high degree of efficiency, but there is room here for expansion and improvement. Most of our roads are hard-paved and we have

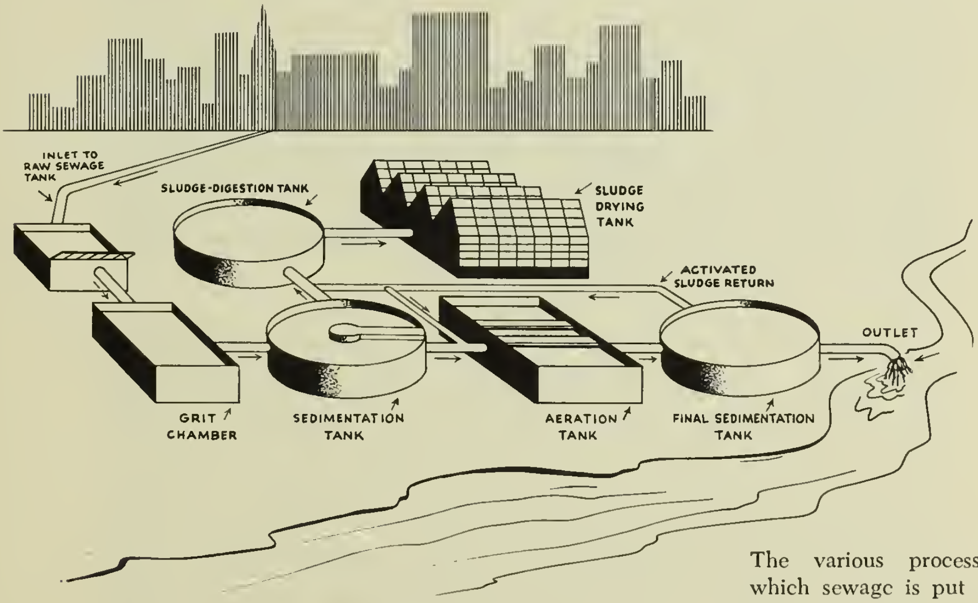
Two pilots walk out to a modern jet plane. Perhaps this one is powered by engines made in Connecticut.

a denser road net than most parts of this country. Even so, our steadily increasing auto traffic demands still more improvements. We have a number of airports, but need more if we are to use air transportation as it can be used. Our railroad network was overbuilt and parts are being abandoned today. But the railroad is an essential transportation system that must be rescued and adapted to our future needs for freight and passenger movements. When one looks around in Connecticut one sees more to be done than has already been done. There is no lack of opportunity for the ambitious young person.

In any human society there develop what we call conflicts of interest. These involve differences of opinion as to how things should be done. We have an excellent example in the case of pollution of our streams by industrial and domestic wastes. When you wash dishes or your clothes, what do you do with the dirty water? You don't want it and the easiest thing to do is to let it go down the drain into the sewer. Where it goes from there you don't know or care, you are rid of it. The same problem faces the manufacturer of textiles, silverware, paper and many other things. He needs clean water to wash things in, but he also needs some place to dispose of the dirty water. He uses the sewer and this drains into the rivers or into the Sound. People downstream on the river or along the Sound *do* care.

They can't use this polluted water and they didn't cause the pollution; you can appreciate how upset they are about the situation. Here is a conflict of interest between upstream and downstream users of the water.

The solution is not simple, but it does exist. The dirty water must be treated so that the more objectionable matter in it is removed. Then, when the sewage plant releases the rest of the water into the river it doesn't create a problem for those who live downstream. Sounds simple, doesn't it? But who is to pay for the treatment? If the man who dirties the water has to pay, it would mean that every time you pulled out the plug in your sink you would pay perhaps two cents. But you will say that this is a community problem and since you pay taxes, the town should do it. Some towns do. Industrial wastes are often very difficult and expensive to extract from the water. If we try to charge the factory for this expense the owner may decide that it is too expensive to continue in business in Connecticut and may move to some less fussy community. We need these factories, they provide jobs for Connecticut people and pay a large part of the taxes that the town collects. However, it is not quite fair to make the town pay for all the expenses of sewage treatment, especially when the most expensive part of the treatment



The various processes through which sewage is put in a sewage plant are diagrammed here. The water discharged into the stream is clean enough so that it won't pollute the river.

Thousands of Connecticut people use the lakes of the state for fishing, sailing and other water sports.

is needed only for the factory wastes. A compromise is needed, one that will share the costs, but will insure that the river waters of the state are cleared up. This is one example of conflict of interest.

Another exists between the general public and the water companies. The latter need pure water for their consumers in the city. But this means that no one else is permitted to use the lake that has been built to store this water. As our population increases we will need more storage lakes, but at the same time we will need more space for recreation. If the water companies are permitted to control all the lakes and ponds, there will be no place for the inland people of Connecticut to swim and fish. We do not as yet have a solution for this problem. Perhaps, one day, you will be able to solve it.

A third conflict of interest exists in the question of the changeover from farm land to housing property. Land that had already been cleared for farming is the easiest land to use for a housing development. There are no trees and rocks to clear away before you build. But every year we need between 5,000 and 10,000 acres for new houses. If all buy and build on farm land, then by the year 2000 we will have no more cropland in the state. Land

Hunting is one of the ways that Connecticut people want to use their state. One of these hunters has had some success.

taken for housing is lost permanently for agriculture. We need to retain our farm land. But, if we say that no farmer can sell his land for housing, we prevent him from using his land with the same freedom that the rest of us have. If we are offered a profit for our land, we can sell it. Are we going to prevent him from doing the same? This, too, is a problem we have not as yet tackled. As a result we have lost to houses a large amount of what was good farm land. How long can we let this go on?

Such conflicts of interest exist in many other aspects of our lives. They are connected with two facts: 1) our population is increasing steadily, and by the year 1975 we will have about 3.4 million people in the state, by 2000 approximately 5.0 million, and 2) our state is not increasing in size. If we lived in a very large state, there might be enough land for all our needs. As it is, there are at least two possible uses for every square mile that we have. Shall 70% of Connecticut be left to grow trees, or shall we reclear part of it for agriculture again? Shall we permit people to use the woodlands for recreation, hiking, hunting, and camping, or shall we turn it over to water companies to protect the water supply that we need in larger quantities every year? We want pure water to drink, but we also want woodlands for recreation, too. How do we get both?

Redevelopment in a city means two things; eliminating the slums and re-designing the city to suit 20th century conditions. Few of our cities were planned, they just grew; now they must be re-built.

Our cities today have many problems. Everything costs more, so they need more tax money, but people are deserting the cities to live in the country or in the suburbs. The stores are also deserting the cities to move out to shopping centers that are nearer their customers. Even the factories want to spread out because city land is very expensive; so they, too, are moving out into the smaller towns. There they can build new plants with large parking places for their workers who have moved out into the suburbs and who commute to work by car. Traffic problems in the city have become very bad, we have too many autos and not enough streets. Most of our larger cities have begun to tackle these problems with urban renewal projects. Slums are being torn down, streets are widened, parking places enlarged, new attractive housing developments are built. They hope to attract people back to the city. By opening up the heart of the city and eliminating some of the disagreeable aspects of urban life that drove people out of the city, they may succeed.

With apartment houses, a city can house large numbers of people on relatively small areas of land. Many people would prefer to live in the city if it were made into a pleasant place to live. We need to pile up people somewhere, otherwise all of

Connecticut will become a housing development as our population gets larger. Our farmlands and wooded areas will disappear and there will be an even distribution of people of about 1,000 people per square mile. A better arrangement would be to have a number of large cities, each surrounded by a ring of suburbs that depend upon the central city. Outside of this ring the balance of the state would be composed of small towns, farms, and woodlands.

There are other problems that our state faces. With an expanding population we will need more of almost everything. More schools, more recreational facilities of all sorts (bowling alleys, baseball diamonds, hiking areas, swimming pools, public beaches, boat marinas, golf courses and tennis courts), more factories, and more stores; we will need all of these. Every year we increase our use of electricity 10%, we double our consumption every ten years. We have already developed almost all the large waterpower sites in the state; only a few remain. Within a few years we will be erecting atomic power plants; plans are already under way for this. The state highway department has already made out a master plan for the state for improving our highways. Whether we can keep pace with our rapid increase in the number of automobiles is a question. Just to park our present autos requires both sides of 1,800 miles of streets. This problem requires very careful study.

This scene is so familiar to most of us that we seldom realize that this is also a new invention in retail sales methods.

Indeed all our problems require study and constant attention. Things are in a state of continual change. While we are giving our attention to one problem, another worsens and demands that we turn to it. This is the challenge of life, and a life that did not present a challenge would be a very dull life indeed.

The story that you have been reading has concentrated upon man's relationship to his environment, as this has changed in the last three hundred and twenty-five years. There are many other sides to our story that have been omitted. The relationship of one man to another is a study in itself. It, too, presents a series of challenges to you. Such problems as family relationships, juvenile delinquency and crime, the problems of government, labor and management relations are a few of them. They are also your problems. In handling them, as in handling the problems that have been discussed in detail here, you have a series of guide lines that have been set up by your elders. Use these guide lines where they fit, but do not hesitate to improve on them where they no longer fit. We know that you will be qualified to handle and work with and even solve many of these problems in the years ahead. Good luck.

APPENDIX

SOME IMPORTANT DATES IN CONNECTICUT'S HISTORY

about 10,000 B.C. – Glacier recedes from Connecticut.
about 4,000 B.C. – First Indians arrive.
1614 – Adriaen Block, representing the Dutch, sails up the Connecticut River.
1620 – English settle Plymouth, Massachusetts.
1633 – Dutch erect a fort, the House of (Good) Hope, on the future site of Hartford.
1633 – John Oldham and others explore and trade along the Connecticut River. Plymouth Colony sets up a trading post at Windsor under William Holmes.
1634 – Wethersfield founded by people from Massachusetts.
1635 – Hartford founded by advance party of Hooker congregation from Newtown (Cambridge), Massachusetts.
1635 – Fort erected at Saybrook by Lion Gardiner.
1636 – Great Migration, Thomas Hooker and company journey from Newtown (Cambridge), Massachusetts to settle in Hartford.
1636 – John Oldham's murder by Block Island Indians.
1637 – Pequot War; Capt. John Mason leads colonists to decisive victory.
1638 – New Haven Colony established by Davenport and Eaton.
1639 – Fundamental Orders of Connecticut adopted by Hartford, Wethersfield and Windsor; John Haynes chosen first governor.
1643 – Connecticut (population about 5,500 people) joins in forming the New England Confederation.
1646 – New London founded by John Winthrop, Jr.
1650 – Code of laws drawn up by Roger Ludlow and adopted by legislature.
1660 – The Hopkins Grammar School founded.
1662 – John Winthrop, Jr. obtains a charter for Connecticut from Charles II.
1664 – Union of New Haven and Connecticut colonies (Connecticut population about 8,000 people).
1675-76 – Connecticut participates in King Philip's War which was fought in Rhode Island and Massachusetts.
1687 – Andros assumes rule over Connecticut; Connecticut Charter taken from meeting room where Andros came to seize it and hidden by Capt. Wadsworth in "The Charter Oak" tree.
1689 – Connecticut resumes government under the Charter.
1690-97 – King William's War.
1701 – Collegiate School authorized by General Assembly.
1708 – Saybrook Platform, providing more centralized control of Established Congregational Church, approved by General Assembly.
1709-14 – Queen Anne's War.
1716 – Collegiate School moves to New Haven; called Yale College the next year.
1739-48 – The Spanish War, capture of Louisbourg, 1745.

1740's – Height of religious "Great Awakening."
1755 – *Connecticut Gazette* of New Haven, the Colony's first newspaper, printed by James Parker at New Haven.
1755-63 – French and Indian War, French give up Canada, 1764.
1763 – Sugar Act passed, hurts Connecticut trade with the West Indies.
1764 – *Connecticut Courant,* the oldest American newspaper in continuous existence to the present, launched at Hartford by Thomas Green.
1764 – Stamp Tax passed, strong opposition in Connecticut.
1773 – Boston Tea Party.
1774 – Connecticut officially extends jurisdiction over Susquehanna Company area in Northern Pennsylvania.
1774 – Silas Deane, Eliphalet Dyer, and Roger Sherman represent Connecticut at First Continental Congress.
1775 – Battle of Lexington and Concord, Connecticut minutemen answer call to arms.
1775 – Connecticut men help plan and carry out seizure of Ft. Ticonderoga.
1775 – Battle of Bunker Hill, British win at tremendous cost in lives.
1776 – Samuel Huntington, Roger Sherman, William Williams and Oliver Wolcott sign the Declaration of Independence; large majority of Connecticut people under Governor Jonathan Trumbull support the Declaration.
1776 – British evacuate Boston.
1776 – Nathan Hale captured and executed.
1777 – British troops under General Tryon raid Danbury.
1779 – British troops under General Tryon raid New Haven, Fairfield and Norwalk.
1781 – Benedict Arnold's attack upon New London and Groton; massacre at Ft. Griswold.
1781 – Washington and Rochambeau confer at Webb House in Wethersfield; American and French troops march south, capture Cornwallis.
1783 – Meeting of 10 Anglican clergy at Glebe House, Woodbury, leads to consecration of Bishop Samuel Seabury and beginning of Protestant Episcopal Church in United States.
1783 – First line of stage coaches operates through Connecticut; Boston to New York.
1784 – First American law school established at Litchfield by Tapping Reeve.
1784 – Earliest Connecticut cities incorporated – Hartford, Middletown, New Haven, New London and Norwich.
1784 – Connecticut relinquishes Westmoreland area to Pennsylvania.
1784 – Act passed providing for emancipation of all Negroes at age of twenty-five.
1787 – Oliver Ellsworth, William Samuel Johnson and Roger Sherman serve as Connecticut's representatives at Constitutional Convention, Philadelphia.
1788 – Convention at Hartford approves Federal Constitution by 128-40 vote.

1790 – John Fitch operates successful steamboat on Delaware River.

1792 – First turnpike road company, New London to Norwich, incorporated.

1792 – First banks established at Hartford, New London and New Haven.

1795 – Connecticut Western Reserve lands (now Northeastern Ohio) sold for $1,200,000 with proceeds constituting the School Fund.

1795 – First insurance company incorporated as the Mutual Assurance Company of the City of Norwich.

1798 – Assembly transfers school control from ecclesiastical society to school society.

1799 – Eli Whitney procures his first Federal musket contract; within next decade develops a system of interchangeable parts, applicable to many industries.

1802 – Brass industry begun at Waterbury by Abel Porter and associates.

1802 – First Merino sheep brought to United States, to Derby.

1807 – First important English dictionary in United States published by Noah Webster.

1810 – First manufacturing census of Connecticut.

1810 – Hartford Fire Insurance Company incorporated.

1812-14 – War of 1812, unpopular in Connecticut; new manufactures, especially textiles, boom.

1814 – Hartford Convention held in Old State House.

1815 – First steamboat voyage up the Connecticut River to Hartford.

1817 – Thomas Gallaudet founds school for the deaf in Hartford.

1818 – New Constitution adopted by convention in Hartford and approved by voters; ends system of established church.

1823 – Washington College (now Trinity) founded in Hartford.

1828 – Farmington Canal opened to Massachusetts line.

1829 – First Catholic church (Church of the Holy Trinity) built in Hartford.

1829 – Windsor Locks canal opened.

1831 – Wesleyan University founded in Middletown.

1835 – Revolver patented by Colt.

1835 – Music Vale Seminary, first American music school, founded at Salem by Oramel Whittlesey.

1837 – First rails laid down in Connecticut, Stonington to Rhode Island line.

1838 – Railroad completed between New Haven and Hartford.

1840's and 1850's – Peak of whaling from Connecticut ports and especially from New London.

1842 – Wadsworth Athenaeum, Hartford, first public art museum, established.

1843 – Charles Goodyear develops vulcanizing process for rubber.

1844 – Dr. Horace Wells uses anesthesia at Hartford.

1845-46 – Large Irish immigration begins.

1847 – First Jewish Congregation (Beth Israel) formed in Hartford.

1847 – First American agricultural experiment station – at Yale.

1847 – Farmington canal closes and railroad built on towpath.

1848 – Slavery ended in Connecticut.

1849 – First teachers' college founded at New Britain (now Central Connecticut State College).

1850 – P. T. Barnum, "greatest showman," settles in Bridgeport.

1853 – Aetna Life Insurance Company started in Hartford.

1860 – Lincoln speaks in several Connecticut cities.

1861 – First Doctor of Philosophy degree conferred in the U.S. (by Yale).

1861-65 – Approximately 55,000 men serve in Union Army; William Buckingham war-time governor.

1863 – Travelers Insurance Company started in Hartford.

1870 – United States Coast Guard Academy established at New London.

1873 – Winchester rifle built in New Haven "that helped to win the West."

1874-1891 – Samuel L. Clemens (Mark Twain) writes *The Adventures of Tom Sawyer, Adventures of Huckleberry Finn, A Connecticut Yankee in King Arthur's Court* and other works in Hartford.

1877 – First telephone exchange in world opens at New Haven.

1881 – Storrs Agricultural College founded (became University of Connecticut in 1939).

1882 – First football game in world introduced by Walter C. Camp, Yale coach.

1895-1900 – Manufacture of automobiles by Pope Manufacturing Company of Hartford.

1893 – Southern Connecticut State College (formerly New Haven Normal School and later New Haven State Teachers College) founded.

1900 – First United States Navy submarine constructed by Electric Boat Company.

1911 – Connecticut College for Women founded at New London.

1917-18 – Approximately 66,000 Connecticut men serve in World War I.

1919 – Women given vote.

1925 – Pratt & Whitney Aircraft founded at Hartford.

1932 – St. Joseph College founded in West Hartford.

1936 – Floods cause enormous damage in Connecticut River Valley.

1938 – Hurricane and floods produce heavy loss of life and property.

1939 – First successful helicopter built by Igor Sikorsky, Stratford.

1941-45 – Approximately 211,000 Connecticut men serve in World War II.

1950-52 – Approximately 67,000 Connecticut men serve in Korean War.

1954 – *Nautilus,* world's first atomic-powered submarine, launched at Groton.

1955 – Serious floods cause heavy damage and loss of life, especially in the Naugatuck Valley.

1955 – Shakespeare Memorial Theatre opened at Stratford.

1957 – Ground broken for first building in New Haven's Oak Street redevelopment area.

1957 – First feature motion picture ("Runaway") made entirely in Connecticut.

1958 – 129-mile Connecticut Turnpike opened.

1959 – Assembly votes to abolish county government (effective 1960); also to abolish local justice courts and establish district courts (effective 1961).

1960 – Ground broken for first building in Hartford's Front Street redevelopment area.

INTERESTING FACTS ABOUT CONNECTICUT

Official designation of the State – "Constitution State"

Indian Name – Quinnehtukqut ("Beside the Long Tidal River")

State Motto – *Qui Transtulit Sustinet* (He Who Transplanted Still Sustains)

State Flower – Mountain Laurel

State Bird – the Robin

State Tree – the White Oak

State capital (since 1875) – Hartford.

U.S. Senators from Connecticut – 2

U.S. Congressmen – 6

State Senators in the General Assembly (1961) – 36

Representatives in the General Assembly (1961) – 294

Colleges and Universities – 30

Public, Private and Parochial Elementary and Secondary Schools – 1,247

Population (1960) – 2,516,905

Cities with the largest population – 1. Hartford (162,785) 2. Bridgeport (156,162) 3. New Haven (148,923)

Number of houses (1958) – 545,552

Area of the State – 5,004 square miles (including water areas); 3,205,760 acres

Length of Boundary – 371 miles

Highest Altitude – (Highest peak entirely within Connecticut) Bear Mountain, 2,315 feet; (highest point in Connecticut, on side of mountain whose peak is in Massachusetts) Mt. Frissell in Salisbury, 2,380 feet above sea level.

Lakes and Ponds – 4,093 (Ct. Water Resources Comm.)

Total Mileage of Rivers – 8,400

State Parks – 73 (21,297 acres)

State Forests – 27 (123,356 acres)

Number of farms (1954) – 12,754

Agricultural Fairs held (1959) – 47

Total cash farm income – $168,000,000.00 (1954)

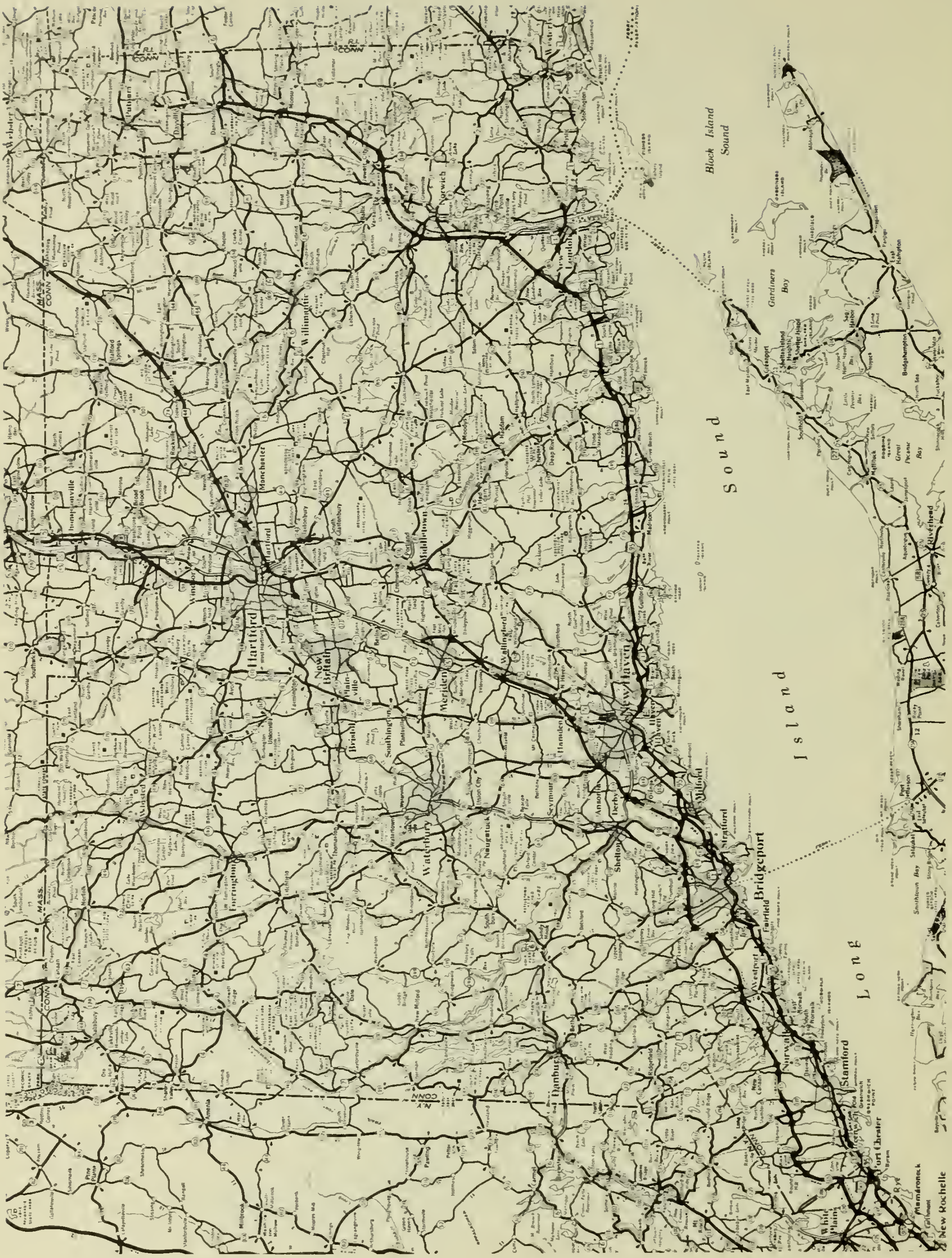
Newspapers and periodicals published – 123 approximately

Broadcasting stations – 42

Television stations – 6

Banks and savings institutions – 647

State government disbursements (fiscal year, June 1959 to 1960) – $448,340,580.22



Road map courtesy of American Automobile Association

SOME PLACES OF INTEREST TO VISIT IN CONNECTICUT

The information listed below was compiled by the editors from the following sources:

- Connecticut Audio-Visual Education Association
- Connecticut Development Commission
- Connecticut Historical Society
- Connecticut League of Historical Societies
- Connecticut Motor Club

and chiefly from the following publications:

The Connecticut Guide, compiled by Edgar L. Heermance

Connecticut Register and Manual

Guide to the History and Historic Sites of Connecticut, by Florence S. M. Crofut

The New England Guide

The New Haven Register and New Haven Journal Courier (Saturday edition)

The following criteria were used in compiling the list:

1. Places of historic interest *open to visitors.*
2. Places of geographic interest *open to visitors.*
3. State Parks.

Please note that places of amusement have not been listed unless they are in a State Park. Historic homes have not been listed if they are not open to visitors as exhibits, or unless there are no items of category 1, 2 or 3 in the locale mentioned. The editors have endeavored to include some item or items of interest in each of Connecticut's towns.

If any reader notices that information is incorrect or if any place of historical or geographical interest *and open to visitors* has been overlooked, the editors would be grateful to receive the correct information about such a listing.

In order to visit the newspaper and principal industries of each town the visitor ought to consult the public relations or visitation department of each organization.

List begins next page

ANDOVER	**Burnap Brook** — An attractive walk through a pine gorge and a favorite spot for artists. A road to the north leads to Almada Lodge, a fresh-air camp for underprivileged children.
ANSONIA	**Richard Mansfield House** — 35 Jewett Street (1748), a fine example of the larger type of "salt-box" house; open daily 2-5, May to October; 25c.
ASHFORD	**Thomas Knowlton Home** — Knowlton (1740-1776) was in the French War, had charge of the company of Conn. men that held the rail fence at Bunker Hill, organized the select corps known as Knowlton's Rangers, in which Nathan Hale was an officer. Knowlton was killed while leading an attack at the battle of Harlem Heights.
AVON	**Avon Old Farms** — A preparatory school for boys has unusual buildings of sandstone quarried and carved on the premises. Most of the woodwork is hand-hewn and the school represents an old English village. A tall, round water-tower is a conspicuous landmark.
BARKHAMSTED	**American Legion Forest and People's Forest** — A fine natural preserve with camping facilities, hiking trails, Adirondack shelters, picnic areas.
	Hitchcock Chairs — In Riverton, begun in 1818, the plant is now reproducing items from the original antique pieces which were sturdy, graceful and often had painted decorations on the backs. Visitors can watch workers making rush-bottomed seats; open 9-5 on working days; free.
BEACON FALLS	**Covered Bridge** — Leads 1½ miles north to Spruce Brook, one of the most beautiful ravines in Connecticut. A path climbs to High Rock, with an unusual view. Under the cliff is a large boulder and the remains of an Indian chipping ground for making arrow heads.
BERLIN	**Congregational Church** — (1773) and the first monument in the United States to Civil War veterans, nearby. The huge oak on the Church grounds is said to be as old as the Church.
BETHANY	**Glaciated Bed Rock** — Route 69, Hatfield Hill Road, the surface is scratched and polished by rocks and sand that were frozen into the base of the glacier; the scratches indicate the direction of the ice movement.
	Quaking Bog — An unusually fine example showing all stages of development of the bog and many rare plants.
BETHEL	**Phineas T. Barnum Birthplace** — 28 Elm Street, near the pre-Revolutionary *Barnum Tavern.*
	Seth Seelye House — 14 Center Street, now a public library, sent out two college presidents: Julius H. Seelye of Amherst and L. Clark Seelye of Smith.
BETHLEHEM	**Joseph Bellamy House** — (1738) Residence used for teaching a

succession of young men preparing for the ministry, hence the first theological seminary in America.

Neapolitan Creche — On Flander's Road one mile south off Route 132, an example of eighteenth-century Neapolitan crib art, the nativity scene; open May to Nov. 10:30-5; free.

BLOOMFIELD

Conn. General Life Insurance Company — New architecture of unobstructed work spaces, green-tinted window walls, garden courts and pools, red granite monoliths by the Japanese-American sculptor Isamu Noguchi; tours on request Monday to Friday 9-3, without notice on Sunday 2-5; free.

Matthew Morse House — On the east side of Route 184, 2½ miles southeast of Bloomfield Center, built between 1642 and 1646, still preserved.

BOLTON

Bolton Notch — Contains many geologic points of interest and Indian associations: Squaw Cave, near which an old Indian spring has been preserved; Black Sal's Cave, home of a Mohegan family; an Indian workshop is on the east side of Middle Lake; this is a State Park of 70 acres.

BOZRAH

Bargy Ledges — Bishop Road south to Route 82, passing under the west side of Bear Hill, the ledges are an unusual series of rock formations.

BRANFORD

Thimble Islands — A boat trip can be made through the picturesque islands with their legends of pirates and hidden treasure.

BRIDGEPORT

Beardsley Park Zoo — Noble Avenue; the bird and mammal house is open Tuesday through Sunday, 11-4; the Park has fine woodland walks and concourse, drives, a large lake, and a Shakespearean garden; free.

Museum of Art, Science and Industry — Ninety Acres Park, at junction of Bridgeport-Fairfield town lines and Merritt Parkway; science exhibits include world's largest scale model of our side of moon, work-it-yourself models, history of New England crafts and progress of regional planning, eight acres of nature trails, planetarium; open Tuesday to Sunday, 10-6; planetarium 75c, museum 50c, 25c, 10c. This museum includes the

Barnum Institute of Science and History — Items collected by P. T. Barnum: clothes of Tom Thumb and his tiny wife, mementos of Jenny Lind, mummy cases, Eskimo and Indian objects.

BRIDGEWATER

Excellent views of the Housatonic River valley from the town's high plateau. There are a number of good Colonial houses in the village.

BRISTOL

American Clock and Watch Museum — Located in the Miles Lewis House, 100 Maple Street, it is the only museum in the United States devoted solely to Horology (history of clock-making); more than 600 clocks, made in Bristol from 1790; the Barnes wing is from a 1728 house; library; open daily except Monday, 1:30-5:30; free.

Public Library — (High Street and Main Street) Contains nearly 3,000 pieces of Indian relics gathered from various places in Connecticut, including pottery made by local Indians from foliated talc, of which there are outcrops on the hills around Bristol.

Rockwell Park — West of the city, affords swimming and skating at the lagoon. Scenic drives are bordered by mountain laurel.

BROOKFIELD

Lead Mine — Old mine where galena, sphalerite and other minerals are found in the limestone. The village iron works go back to 1732.

BROOKLYN

Godfrey Malbone Homestead — It was started in 1750 and has fine old elms. Malbone and Israel Putnam quarreled bitterly, but Putnam's son Daniel married Malbone's daughter and became heir to his estate.

Meeting House — On the Green (1770), where Putnam acted as sexton. The church became Unitarian in 1819 and is now used as a Community House. South of this is the equestrian *Putnam Statue* by Karl Gerhardt, erected in 1888; it stands over a sarcophagus containing Putnam's remains, removed from the local cemetery.

Putnam Farm — 3 miles north of the village on Route 93, near Pomfret and ½ mile east of the highway is a large house with shingled walls where Israel Putnam spent his last days. It was on this farm that he left his plow in the furrow on news of the battle of Lexington.

BURLINGTON

State Fish Hatchery — Trout are raised here by the million for stocking Connecticut streams; visitors welcome.

Whigville Copper Mine — Largest ever worked in Connecticut (1839-1854), traces of silver were found and many other minerals, including chalcocite crystals.

CANAAN

Deane's Ravine — 1½ miles southeast from Lime Rock Station, a cascade brook of great beauty.

Housatonic Gorge — Route 43 west to Falls Village, shows fine specimens of folded limestone below the dam, with many characteristic limestone plants.

Music Mountain — A summer school with weekly music concerts during the season.

CANTERBURY

Prudence Crandall House — An architecturally fine house which Miss Crandall opened as a young ladies' seminary in 1831. The following year a negro girl applied for admission, causing a storm, whereupon Miss Crandall dismissed her white pupils and started a school for colored girls. The experiment was soon defeated by mob violence and act of legislature.

CANTON

Collins Company – Exhibition of hand tools made since 1826. Tools made here were heavily used in the Civil War and in Central and South America; the company's hand tools were used almost exclusively in building the Trans-Siberian Railway.

CHAPLIN

Old homes – Main Street should be followed to the left (as the highway by-passes the village). There are several 18th Century and early 19th Century homes. Near the front of the Burying Ground are two pillars on which the founder, Deacon Benjamin Chaplin, described at some length his views on life.

CHESHIRE

Barite Mine – 1½ miles north of the town line a road leads 1 mile east to the principal mine (north of the road) operated from 1840 to 1878. Large transparent crystals, noted for their size and perfection, have found their way to the large museums of the world. Ground barite is used to give weight to paper and cloth.

CHESTER

Abram Mitchell House – (1820) Opposite the Church on Route 9, has a porch with 2-story columns, a graceful doorway, Palladian window above, and other features that are similar to the *Jonathan Warner Homestead* (1798) a little farther on the right.

Airport – A new electronic teaching laboratory for languages and classroom skills is one of several types of industry located at the young but busy airport.

Hadlyme Ferry – The only ferry left on the Connecticut River, worth taking for its views of the river, is at the Cove, reached by turning at the corner of the Warner house on a lane that goes east.

CLINTON

Stanton House – 53 East Main Street (1789), "Lafayette stayed here"; antiques, china, glass, 18th Century store; open daily except Monday, 2-5, May 1 to November 1 and by appointment; free.

COLCHESTER

Comstock Covered Bridge – Route 171 north to Salmon River, one of the few old covered bridges left in Connecticut. There is a picturesque drive up the west bank of Salmon River from this point.

Day Pond State Park – 180 acres, lies on Route 149, 5 miles west of Colchester. It offers fishing, swimming, and picnicking.

Nathaniel Foote House – South side of Norwich Avenue (Rt. 2), which is rebuilt from material in the house erected at the north end of town in 1702 by the leader of the settlement; it is maintained as a museum.

COLEBROOK

Colebrook Historical Society – Old uniforms, costumes, church relics, flag and bell collections, furniture and implements used in Colebrook's early years; open during summer months on Saturday and Sunday afternoons, 2-5, and by appointment; free.

COLUMBIA

Eleazer Wheelock House — (1735) Dr. Wheelock established the Indian school called *Moor's Charity School* (now located next to the Congregational Church) for which Samson Occum, the Mohegan from Montville raised funds in England, the largest contributor there being the Earl of Dartmouth. In 1770 the school was removed to Hanover, New Hampshire, and became Dartmouth College, with Dr. Wheelock as its first president.

CORNWALL

Cornwall Center — Described in 1836 as follows: "The church and the little cluster of white painted buildings surrounding it, at the bottom of a deep valley . . . and the mountains and lofty hills which rise immediately on almost every side, is reported to be one of the finest views in the state."

Covered Bridge — Crosses Housatonic River in Cornwall.

Mohawk Mountain State Park and Forest — 245 acres about 4 miles east of Cornwall just off Route 4, encompasses a large ski area. Facilities include 9 ski tows and trails, a lodge, shop and ski school.

COVENTRY

Nathan Hale Cemetery — The old burial ground has a cenotaph with a beautifully worded inscription put up by Deacon Hale as a memorial to his sons Nathan and Richard. Nathan is in an unknown grave on Manhattan Island and Richard is buried in the West Indies.

CROMWELL

Pierson Nurseries — On Route 9; the nurseries have 16 acres under glass and produce 9 million roses each year.

DANBURY

Isaac Jones House — Chapel Place west of Main Street (1749), one of the old buildings which escaped the British conflagration and the encroachments of a modern city.

Scott-Fanton Museum — 43 Main Street, is open Tuesday, Thursday and Saturday 2-5 and by appointment; donations.

DARIEN

Meeting House — Post Road at Brookside Ave.; where the congregation in 1781 was surprised during services by British and Tories, and were kidnapped; many died on a prison ship near New York.

DERBY

Route 34 up the Housatonic 1¼ miles; the next crossroad leads north in ¾ mile to a good view of the river. The first 100 yds. beyond this turn is interesting to geologists for the rock exposures, which show an unusual mixture of gneiss, schist and granite.

DURHAM

Gen. James Wadsworth House — (1760) Is still covered with the original hand-riven pine shingles and the interior has been carefully restored.

Reed's Gap Quarry — Off Route 15 to the north, shows the contact of the lava with the underlying sandstone, and a little south of it, on the trail, is a fine exhibit of the columnar structure of the trap rock.

EAST GRANBY

Newgate Prison – First copper mine in America (1707); the old shaft served as a State Prison from 1773 until 1827, when Wethersfield prison was completed. Washington sent Tory prisoners here during the Revolution. The ruins are still standing and the traveler may descend to some of the gruesome dungeons underground; small admission charge.

EAST HADDAM

Goodspeed Opera House – Victorian replica of a Paris Opera House complete with hanging balcony, under restoration as a museum and eventually a theatre, once popular as shows were brought from New York and audiences from Hartford by Col. Goodspeed's steamers, in use until 1920's, deeded by the State with 4 acres of land to a non-profit Foundation for reactivation, expected to be opened for visitors by summer, 1962.

Devil's Hopyard State Park – 5 miles north of Route 82, is one of the wildest ravines in Connecticut. There are picnic spots at intervals and rustic foot bridges across the stream where fishing is permitted, and trails through the 860 acres. Up the ravine is the impressive *Chapman Falls,* where a chasm was cut by the stream when its old course was blocked by glacial debris.

Nathan Hale Schoolhouse – (1774) Where Nathan Hale taught school before joining Army, also conducted classes for ladies (a startling innovation) early morning before the young male students arrived; open all year; free.

EAST HAMPTON

Cobalt Mine – In the village of Cobalt, a mile north and ½ mile east, a public picnic area of great beauty at the foot of Great Hill in the Meshomasic State Forest. Since 1762 the mine has yielded some cobalt, mica, nickel and other metals. Below the main shaft, down the beautiful ravine, a long horizontal tunnel was excavated.

Hurd State Park – 698 acres, is southwest of East Hampton on Route 151 and the Connecticut River. Rocky ridge affords fine views. Picnicking and boating.

Skokum Quarry – Reached by a road running south from East Hampton, on the Salmon River, is a good hunting ground for mineral collectors. Beautiful gem heliodor and clear crystals of deep golden beryl have been found here.

EAST HARTFORD

Elisha Pitkin House – Pitkin Street and Roberts Lane (1740), still has fine paneling in the halls. Rochambeau stayed there twice while visiting Washington. French troops were quartered in what is now Silver Lane, named because they were paid in silver, then a rarity.

Timothy Spencer House – 33 Kennedy Street (1735) was restored in 1933 and has three fireplaces and very wide pine paneling, with much Colonial furniture.

EAST HAVEN	**Trolley Museum** – 1878-1936 horsecars to streamliners; rides on Sunday afternoons, April to November, rides on Saturdays and holidays May 30 to Labor Day (20c-35c); open daily June to August 10-6, weekends rest of year 10-5; free.
EAST LYME	**Thomas Lee House** – West of Niantic on Route 156 (1664), a Colonial Museum maintained by East Lyme Historical Society, a little red schoolhouse (1734) is on the same property; open daily May 30 to Labor Day 12-5; 25c.
	Rocky Neck State Park – 561 acres east of South Lyme on Route 156, has an excellent beach for swimming. Picnic facilities, bathhouse, camping, fishing and boat rentals.
EAST WINDSOR	Cloth tents for shade tobacco are abundant in this region during the growing season.
EASTFORD	**Natchaug Forest** – Has attractive spots along Natchaug River and an old trail with stepping stones for the benefit of picnic parties.
EASTON	**Samp Mortar Rock** – 1 mile below the junction of Routes 106 and 58, 1/3 mile west up the hill is a natural mortar scoured out by the glacier. The Indians used it for grinding corn. There is a cave below and the spot was evidently an Indian camp ground. The summit of the hill commands a fine view in all directions.
	Unknown ruins – West of Route 58, about 1½ miles below the Redding town line, is a narrow rocky gorge in which is found a group of old walls and cellar holes, with interesting "crows-nests" made of dry stone. The meaning of these strange ruins is still unexplained.
ELLINGTON	**Constructional Terraces** – On Route 140 to the west, following down Broad Brook, on the right about ¾ mile beyond Sadd's Mills, are terraces formed as the deposits of streams and lakes at the margin of the wasting ice sheet, with terraces reaching into the old crevasses in the ice. This is one of the most characteristic features of glaciation in Connecticut.
	Crystal Lake – The lake has fine scenery and the village of Crystal Lake was an early center for Methodism; the Parsonage was erected in 1795 and was believed to be the first in New England.
	Snipsic Lake – East of the village is an attractive body of water covering 625 acres which was a favorite fishing ground of the Indians. It was originally spelled Shenipsit.
ENFIELD	**Active Sand Dunes** – 1½ miles northwest, near the Mass. border is a good example where sand has been blown up on an old glacial flat and is constantly shifting its form.
	Shaker Village – Elm Street and Shaker Road (1787) where members of the sect established a celibate communistic

settlement until 1915. Most of the buildings are still standing.

ESSEX

Griswold Inn – The row of small old houses on Main Street make it one of the quaintest streets in Connecticut. The inn is on the right, built in the middle of the 18th Century, it is changed very little except for the addition of an old schoolhouse as a tap room.

Pratt House – Restored antiquities and the fine Griswold collection of early American furnishings; open July 1 to September 15 Monday to Friday 1-4, Saturday and Sunday by appointment; 25c.

Pratt's Village Smithy – Established in 1677 and handed down from father to son for eight generations.

FAIRFIELD

Blossoming Dogwood Trees – During the first three weeks of May the mass of Dogwood trees in the Greenfield Hill area has usually drawn visitors from the entire state.

Fairfield Historical Society – Glass, lustreware, manuscripts and paintings from 1790; open weekdays 10-5:30; free.

Old Whipping Post – On central Green across from the Town Hall, now used only for posting legal notices.

FARMINGTON

Canal Aqueduct – North on Route 10 just before Avon line, the canal lies ¼ mile to the left. Here it crossed the Farmington River by seven spans of 40 feet each. Three of the six piers are still standing in fair condition.

Farmington Museum—Stanley-Whitman House – 37 High Street (1660). Period furniture, pewter, china, silver, glass and manuscripts; open Sundays, year-round 2-5; April 1 to Nov. 30 daily except Monday 10-12, 2-5; Dec. 1 to March 31, Fri., Sat. and Sunday only; 50c, children 10c.

Hill-stead Museum – ½ mile from the town center (1901), a luxurious country house which overlooks the valley, has original furnishings, paintings by Monet, Degas, Manet, Whistler and others; open Wednesday, Thursday, Saturday and Sunday, 2-5; 50c.

FRANKLIN

Yantic Falls – Across the Norwich line on Route 32. The scenic gorge has been cut through ancient sedimentary rock. Monazite crystals have been found near this locality. After the battle of Great Plain in 1643, many of the retreating Narragansetts were driven by the Mohegans over this cliff to their death.

GLASTONBURY

The unusual number of Colonial houses along the highway makes the trip through Glastonbury on Route 15 a constant delight.

White Oak – At the junction of Route 2 and Route 83 is a large oak, nearly 20 feet in circumference, under which Asbury, the father of American Methodism, preached about the time of the Revolution. Soldiers on the march in the War of 1812 used the tree for target practice.

GOSHEN

Tipping Rock – ¾ mile northwest of North Goshen is a glacial boulder weighing 80 tons which can be slowly moved back and forth, about 100 yards north of a small reservoir.

GRANBY

McLean Game Refuge – 2500 acres of beautiful drives and natural settings; picnic grounds are provided.

GREENWICH

Audubon Nature Center – 8 miles north on Riversville Road, 425 acres of land with museum, sanctuary and self-guiding trail; open daily and Saturday 9-5, Sunday 1-5 (Museum closed on Monday); free.

Bruce Museum – Steamboat Road (1850), art history and natural history, relics, 40 dioramas of wild life in Western Hemisphere, 20,000 exhibits, live monkeys and snakes; open weekdays 10-5, Sundays 2-5, closed Saturdays and holidays; free.

Bush-Holley House – (1660) At Cos Cob, local items and historical records; open daily except Monday 2-5, Saturday 10-5; free.

Putnam Cottage – 243 East Putnam Avenue (1729), where General Israel Putnam was purported to have caught sight of redcoats in his mirror while shaving, then quickly escaping, in 1779; four rooms furnished in 18th Century and 19th Century antique furniture; open all year Monday, Thursday, Friday, Saturday 10-5 and by appointment.

GRISWOLD

Pachaug Cemetery – 1½ miles east of the village of Pachaug; trees planted in the cemetery have brought copious reproduction of balsam fir, black spruce and arbor vitae underneath the native oak and pitch pine. North of this point is a typical *Esker*, an irregular ridge formed by the deposits of a stream under the glacial ice. The road which turns south beyond the Pond passes through *Sand Flains,* with interesting sand vegetation.

Hopeville Pond State Park – 316 acres 3 miles east of Jewett City, has fishing, swimming, picnicking and boating facilities.

GROTON

Ebenezer Avery House – (18th Century), American wounded were left here during the Revolution; open by appointment.

Monument House Museum – Battle and seafaring items, traces of the ramparts on the heights; *Groton Monument,* 135 feet high, has 166 circular steps to give visitors a superb view of the harbor, Long Island, the Connecticut River and other landmarks; Tower closed Monday and Thursday May 30 to October 12, open otherwise; free.

Submarine Library and Museum – Thames Street, submarine models, flags and memorabilia, including a working model periscope, history from Alexander the Great to modern submarines; open daily 10-4, Saturdays May to October, closed Sundays and holidays; free.

GUILFORD

Thomas Griswold House and Farmers' Museum — Early agricultural tools and historical exhibits; open in summer daily 10-5:30, in winter Wednesday, Saturday and Sunday 10-5:30; 50c.

Hyland House — Boston Street (1660), original clapboards, five fireplaces, well furnished and attractive interior; open daily June 15 to September 30 11-5; 50c, children under 12 free.

Henry Whitfield House — Whitfield Street (1639), oldest stone house in New England, perhaps in U.S., 17th Century antiques, herb garden, relics; open daily except Monday, 10-5 April through October, 10-4 December through March, closed 12-1 daily, closed November; adults 50c.

HADDAM

Shopboard Rock — ¾ mile on the right of Route 9 past Higganum Station, a huge boulder with a flat top, where an early tailor is supposed to have cut out a suit for a customer. Close to the Middletown line, on the east of the highway, are *Seven Falls,* in a roadside park. Directly opposite, about 50 feet west of the old highway, is *Bible Rock,* where several layers of stone standing on end give the appearance of an open book.

Haddam Meadows State Park — 158 acres, is on the Connecticut River outside Haddam. Boating, fishing and picnicking.

HAMDEN

Jonathan Dickerman House — (1770) Rare documents and furnishings by Hamden Historical Society; open Saturdays 1:30-5; free.

Eli Whitney Arms Factory — Across Lake Whitney to the east, made of trap rock.

Eli Whitney Barn — On the west side of Whitney Avenue, a classical structure erected in 1816.

Sleeping Giant State Park — 1,216 acres 8½ miles north of New Haven on Route 10, includes forested Mount Carmel with stone lookout tower and historical museum. Picnicking, shelters and camping.

HAMPTON

The House That Women Built — A mile north of the village on Route 97, on the right. The bride, Sally Bowers, when her husband and all the able-bodied men of the community had entered the Revolutionary army, solicited the help of the women in raising her house. It is said to have been framed by a lame carpenter.

HARTFORD

Connecticut Historical Society — 1 Elizabeth Street, museum of furniture, portraits, prints, relics, glass, silver, tavern signs, china, Indian relics, library of 60,000 volumes and papers; open daily except Sundays and holidays 9:30-5:30, Museum 1-5 same days, building closed Saturday at noon in summer; free.

Connecticut State Library — Capitol Avenue, memorabilia includes original colonial Charter (hidden in Charter Oak tree), portraits, furniture, Indian artifacts, swords, coins, Lincolniana and large Colt Collection of Firearms; open Monday to Friday 8:30-5, Saturday 9-1, closed Sunday and holidays and holiday weekends; free.

Harriet Beecher Stowe House — 73 Forest Street, home of author 1873-1896, family treasures and furnishings; open daily 2-5; adults 25c, children free.

Mark Twain House — 351 Farmington Avenue, home of Samuel Clemens and family for 20 years, many of his finest works written here, south facade reflects a Mississippi River steamboat complete with "decks and pilot house," rooms with original and period furnishings; open daily except Monday 2-5, Saturday 10-5 (summer months daily except Monday 10-5, Sunday 2-5); adults 75c, high school students 50c, children 25c.

Old State House — Designed by Charles Bulfinch, America's first native born architect, it was the State Capitol from 1796 to 1878; changing exhibits, restored Senate Chamber, offices of the Governor, Treasurer and Secretary of State refurnished; open Tuesday through Saturday 12-4, closed holidays; adults 50c, children 10c, school classes free.

State Capitol — Of Connecticut marble, its exterior is adorned with statues, medallions and bas-reliefs commemorating people and events in Connecticut history. The interior contains paintings, statues and historical relics, buttons, Israel Putnam's tombstone, the figurehead of Admiral Farragut's flagship *Hartford*, Lafayette's camp bed and battle flags of Connecticut Regiments in the Civil War; open Monday to Friday 8:30-4, guided tours 9-3; free.

Travelers Tower — Main and Grove Streets, is the tallest structure in New England, 527 feet high. The observation tower is open from June 1 to Labor Day; free.

Trinity College — Situated on an imposing bluff, its famous "Long Walk" is 1/6 mile in front of the gothic buildings, a good location in which to hear the frequent concerts on the 30-bell Plumb Memorial Carillon, usually Sunday afternoon from 4 to 5.

Trinity College Watkinson Library — Collections from the 12th Century and incunabula, illuminated Latin Books of Hours and many other treasures can be seen, including Audubon's great work, *Birds of America*, in several huge volumes of colored engravings; visitors welcome Monday through Friday 9-12, 1-5, also on Tuesday 7-10, when the college is in session, and by appointment; free.

Trinity College Chapel — One of America's finest examples of pure Gothic architecture. The interior is known for its woodcarvings of not only religious scenes but of many

American traditions. The stained windows are also well-known. Visitors welcome all year and services are open to the public.

Trinity Museum of Natural History — Boardman Hall, contains mineral and rock exhibits, native and migrating birds, birds' eggs and mounted birds, fossil skeletons show the evolution of the horse and the elephant; visitors welcome.

Wadsworth Athenaeum — 50 galleries of the Colt, Morgan and Avery Memorial buildings contain art of Europe and America, furniture, tapestries, arms and armor, period rooms and numerous other types of collections and exhibits; open Tuesday to Friday 10-5, Saturday 9-5, Sunday 1:30-5:30, closed Monday and holidays; free.

HARTLAND

Congregational Church — East Hartland on Route 20 (1801), from its tower there is a fine view and it is possible to make out 53 spires of churches in Connecticut and Massachusetts.

Falls Brook — Near the Hartland Fire Tower, has cascades across moss-covered ledges. Near the boundary of Mass. and Conn., is the pool known as *Black Hole,* with the ruins of early mills.

HARWINTON

Soapstone Quarry — A mile east from Campville Hill on the old road from East Litchfield, Route 116; it was used by the Indians to make utensils.

HEBRON

Amston Waterwheel — On Route 85 in the village of Amston, the waterwheel is said to be the largest in the nation.

Porter's Grist Mill — On Route 14 about ¼ mile west of Hebron village, the mill, though no longer in use, preserves its millstones and waterwheel.

Gay City State Park — 1,542 acres 8 miles southeast of Manchester on Route 85, has fishing, swimming and picnicking.

KENT

Bulls Bridge — Route 130, one of the few covered bridges surviving in Connecticut.

Iron Mines — Route 130, about one mile east of South Kent, left turn, one of the most important iron foundries in early Connecticut. The picturesque ruin of one of the furnaces can be seen just north of Kent village, across the railroad opposite Gilbert's store.

Kent Falls State Park — 4 miles northeast of Kent on Route 7, 275 acres with a picturesque waterfall of 80 feet which can be reached on foot above the rapids, that drop over ledges of white marble in a setting of hardwood and hemlock.

Lake Waramaug State Park — 95 acres east of Kent, fronts on the western shore of a popular resort lake. Swimming, boating, fishing; campsites, picnic grounds.

	Macedonia Brook State Park — 1,845 acres, is 4 miles northwest of Kent off Route 341. Picturesque Nodine Hollow Brook and cascades. Picnicking, camping.
KILLINGLY	**Alexander Lake** — A mile west of Attawaugan where Wildwood Park is located. According to legend, the attractive lake was once a mountain, submerged by the Great Spirit as a punishment for the Indians who were engaged in drunken dances on the summit.
	Old Furnace State Park — 101 acres southeast of Danielson on Route 6, offers picnicking, fishing and swimming.
KILLINGWORTH	**Chatfield Hollow Brook** — Route 80, there is an Indian cave about 1/3 mile up the brook, on the east bank. 2 miles north of Route 80 there is the site of an old grist mill, with the old undershot water wheel restored.
	Chatfield Hollow State Park — 345 acres west of Killingworth on Route 80, has swimming facilities, fishing, fireplaces and trails.
	Gneiss Rock — On Route 81 north from Clinton, about ½ mile north of the town line, the road cut reveals a remnant of old rock (gneiss) 8 ft. thick, which decayed before the glacier and was protected by a covering of glacier till, a rare phenomenon for New England.
	Old Ely House — Pleasant homestead where Longfellow was believed to have written the "Birds of Killingworth," open to visitors.
LEBANON	**Lebanon Green** — An excellent example of a colonial village green relatively unchanged.
	Trumbull House — (1740). Home of Revolutionary Governor Jonathan Trumbull, father of artist Col. John Trumbull; a tunnel leads from the house to the Colonial War Office where many Revolutionary plans were made; open May to December, Monday and Wednesday 10-5, Saturday 2-5; 50c.
LEDYARD	**Ledyard Pequot Reservation** — Off Route 2, 1½ miles past The Rockery the first road turning south leads to 129 acres of land left to the Pequots by Gov. Winthrop. The old council rocks are found on the summit of Indian Town Hill, a half mile to the west.
LISBON	**Quinebaug Gorge** — On Route 12. The late uplift of this part of Connecticut probably caused the stream to seek a new course after the ice age. There are good views from the highway. Permission may be secured to walk over the suspension footbridge near Taft Station, above the dam of the Conn. Light & Power Company, which gives the best sight of Quinebaug Falls.
LITCHFIELD	**Historical Society** — In Noyes Memorial Library opposite the Green; portraits, historical furnishings, Indian relics, early records; open June to September, Tuesday to Saturday

2:30-5:30, Thursday 11-1, October to June Thursday 11-1, 2:30-5:30 and by appointment; free.

Tapping Reeve House – South Street (1773). America's first law school, documents, furniture and students' records; open May 15 to October 15 2-5, Wednesdays closed; 50c, children 25c.

White Memorial Foundation – Routes 61 and 63, a game sanctuary of 3,500 acres and including about half the shoreline of Bantam Lake. There are many foot and bridle paths and facilities for swimming, camping and picnicking.

Mount Tom State Park – 223 acres 6 miles southwest of Litchfield on Route 25, provides a trail to stone tower on Mount Tom (1,325 ft.). Swimming and picnicking.

LYME

Hamburg Village – A picturesque shipbuilding village which has been a delight of artists.

Joshua's Rock – North of Eight Mile Cove, from which an Indian sachem of that name used to hurl defiance at his enemies in canoes below. Nearby occurred the massacre by the Pequots of Capt. John Stone and most of his crew, in 1634.

Gillette Castle – (State Park) Atop a high cliff overlooking the Connecticut River, actor William Gillette's, famed for role of Sherlock Holmes, former home resembles a medieval Rhine Castle with granite walls 4-5 ft. thick, carved oak and original furnishings; open May 30 to October 12 daily 11-5; 30c.

MADISON

Hammonasett Beach State Park – Largest public bathing beach in Connecticut (2 miles long), with extensive camping ground, picnicking, fishing, bathhouses and parking area; it is a good sample of sand dunes and sand dune vegetation as developed along the Connecticut coast.

Nathaniel Allis House – (1739). Contains several period rooms, exhibits of tools and equipment for farming, carpentry, spinning and weaving, shipbuilding, maps, documents and books, costumes and needlework; open June 15 to September 15, Monday to Friday 10-5; 25c.

MANCHESTER

Pitkin Glass Works – Ruins of the famous glass works which operated for 25 years from 1783. The walls are a fine example of early stonework and look similar to ruins of an English abbey.

MANSFIELD

Hanks Hill – Where the first silk mill was established in America; the original building has been moved by Henry Ford to the museum at Dearborn, Michigan, but the site is marked. Nearby was the foundry where the Hanks family cast brass cannon during the Revolution, probably the first in the country, and later cast church bells.

MARLBOROUGH

Marlborough Tavern – In the center, built about 1750, it was a famous stopping place between New London and Hartford. Its owner, Col. Buell, repaired muskets there for soldiers during the Revolution. The house contains one of the swinging partitions in the chambers, which could be raised to form a ballroom.

MERIDEN

Moses Andrews Homestead – 424 West Main St. (1760). Was the first Episcopal place of worship; now maintained by the Meriden Historical Society; open Sunday 2-5 and by appointment; 25c.

Hanging Hills Area – A striking set of hills formed by two successive lava flows; has parks, trails and numerous geologic and natural features for the hiker, camper and visitor.

Hubbard Park – 2 miles west of Meriden on Route 6A. A beautiful park of 900 acres in the Hanging Hills, which rise to 1,007 feet. In the park are Castle Craig, a stone observation tower and the Meriden Reservoir, drives, paths and a nature trail. On the top of West Peak are tennis courts, a swimming pool and a zoo; the latter is free.

MIDDLEBURY

Breakneck Hill – Rochambeau's troops camped at the foot of the hill, marked by a stone monument. The road runs along the north shore of Lake Quassapaug with its fine stretch of laurel. A bog to the right is of interest to botanists for its unusual aquatic plants.

MIDDLEFIELD

Elias Coe House – South from Route 147 on Powder Hill Road, west of the RR in about ¾ mile on the right (1723), is probably the oldest house and has preserved much of its interior.

Dinosaur Tracks – A little below the Coe house and 100 feet back from the road, the tracks are found in a small abandoned sandstone quarry, now maintained by Peabody Museum of Yale.

Lyman Farm – One of the largest orchards in the State, worth seeing when the apple and peach trees are in bloom.

Wadsworth Falls State Park – 285 acres 3 miles southeast of Middletown on Route 157, offers fishing and swimming.

MIDDLETOWN

General Mansfield House – Period collections and furniture; open Wednesday 3-5 and by appointment; 35c.

Middletown Historical Society – 194 Court Street, contains exhibits of historical, religious and ethnological material; open first and third Friday of the month 3-5; free.

Russell House – One of the show places of Middletown, it was built in 1828, now it is the home of the Honors College of Wesleyan.

Wesleyan Olin Library and Davidson Art Center – American and European art collections, exhibitions, Albert Einstein's original manuscripts of Theory Of Relativity; open all academic year; free.

Wesleyan Museum – In Judd Hall at the south end of the row, has slabs of prehistoric footprints from the sedimentary sandstone in the vicinity and other specimens of the region, as well as Indian relics and a coin collection.

MILFORD

Eels-Stow House – (1669). Once housed sick Revolutionary War prisoners and is now the headquarters of the Milford Historical Society; period furniture and furnishings, open May 15 to October 1-5; free.

Liberty Rock – North side of Post Road, east from Devon, where minute men used to watch movements of the British on Long Island Sound, one patriot carved "Liberty, 1776" on it and local D.A.R. keeps flag flying there.

MONROE

Booth's Bismuth Mine – Route 111, a road then turns east in about 2 miles through East Village. Reopened in the 1930's, where bismuth occurs in a free state in the quartz. Beryllium ore is also found.

Feldspar Quarry – West on Route 11, about 1 mile from Monroe village, Barnhill Road 75 ft. west of a deserted house, there are many minerals in the pegmatite veins. Some good semi-precious gem stones have been cut from the rose quartz.

MONTVILLE

Cochegan Rock – A mass of granite, probably the largest glacial erratic in Connecticut, 50 feet square, 60 feet high and weighing 6,000 tons. Uncas used it as a retreat.

Fort Hill – West of the highway opposite the Museum is the site of the fort of Uncas with some of the original stones.

Fort Shantok State Park – 4 miles south of Norwich on Route 32, 177 acres on the west bank of the Thames River, with picnicking and swimming facilities. *Fort Shantok*, located here, is near the burial ground of earlier Mohegans. The outlines of the trenches are still visible. More Indian battles were fought here during historic times than in any other spot in Connecticut.

Uncas Hill – South of the Mohegan Congregational Church in Mohegan, about ¼ mile is the hill with an extensive view and the cellar of Uncas' cabin and two nearby springs. On the north side of the Church is a small Museum with a collection of Indian relics and reproductions. In the yard are the frames of an Indian round house and a long house, made of bent saplings.

MORRIS

Bantam Lake – The largest natural lake in Connecticut covers about 1200 acres, at an elevation of 900 feet. It was a favorite camping ground of the Pootatuck Indians. Numerous arrow heads have been found at the north end.

Mt. Tom State Park – Is interesting to geologists as an intrusion of hornblende gneiss within the surrounding Hartland schist. The stone tower at the summit gives a commanding long range view.

MYSTIC

Denison House – (1717). Also known as Pequotsepos Manor, it has restored furnishings and period relics; open April 15 to November 1 daily except Monday 1-5 and by appointment; 50c, children under 12 10c.

Mystic Seaport – The "living museum of the sea," a re-created 19th Century New England coastal village of 20 acres which has shops where various crafts are explained, a planetarium and a daily educational film showing, ship models, marine paintings and prints, figureheads, logbooks and a large whaling collection. The last existing whaleship "Charles W. Morgan," the training ship "Joseph Conrad" and the "Bowdoin" can be boarded by visitors. A new diorama shows the entire Mystic and surrounding harbor at its peak during Connecticut's most active maritime period; open daily except Thanksgiving and Christmas 9-5; adults $2.00, children under sixteen 50c, special group rates.

NAUGATUCK

Collins Tavern – U.S. 8 in Straitsville, has an overhanging front roof supported by 6 slender 2-story columns. The doorway, with square pillars, pilasters and plain gabled pediment, intervenes between the 5th and 6th columns.

NEW BRITAIN

Museum of American Art – And Children's Museum of Natural History, 56 Lexington Street. Permanent collections of outstanding 19th and 20th Century artists, including Thomas Hart Benton's murals "Arts of Life in America"; lectures and demonstrations; open all year 2-5:30, closed Mondays and holidays; free.

Walnut Hill Park – Contains an illuminated 97-foot World War Memorial shaft, one of the State's finest monuments. The park has tennis courts and baseball diamonds in addition to beautiful rose gardens.

NEW CANAAN

Bird Sanctuary and Wildlife Preserve – On Old Stamford Road (take Exit 3, Merritt Pkwy., north 1½ mi.). 18 acres of unspoiled woodland with small, winding trails, ponds, streams and rustic bridges, birds can be spotted at central feeding stations; open all year; free.

Jelleffe's Mill – (Jelleffe Mill Road near Weed St.) and *Buttery's Mill* (Silver Mine Rd.) have overshot wheels still operating; *Silver Mine Forge* nearby has two old dams.

Silvermine Guild of Artists – 2 miles off U.S. 7 from Parkway exits 38, 39, 40. It is one of the largest year-round places offering exhibits and instruction in painting, sculpture, ceramics, design and other related arts. Monthly exhibits are held of painting and sculpture; open daily except holidays 12:30-5:30; free.

NEW FAIRFIELD

Pootatuck Council Cave – West of Squantz Pond on the summit of Pond Mountain, it is supposed to have been used by Indians.

NEW HARTFORD

New Hartford House — Basement of the brick building was the shop where Elias Howe invented his sewing machine in 1845. The first woman in the world to operate a practical sewing machine was a school teacher from New Hartford.

NEW HAVEN

Center Church — Temple Street, center of Green, covers part of the old burial ground. Some 137 historic gravestones, dating from 1687, can be seen. Tuesday to Friday 9-5, Saturday 9-12, guide service available; free.

East Rock Park — 647 acres of natural beauty on a rock 359 feet high which overlooks the entire city of New Haven. The peak was formerly used by Quinnipiac Indians to make smoke signals. A Soldiers and Sailors Monument of the Civil War and Pardee Rose Gardens are also in the park, which has picnic facilities; free.

Fort Hale Park — Overlooking harbor on the east, contains ruins of old Fort Hale, an important fortification of the Revolution, and picnic area.

The Green — Covers ten acres in the center of the city, remains as plotted by the original settlers. The three churches on the Green were built around 1815. The Federal Building, the U.S. Post Office and Ives Memorial Library face the Green.

Grove Street Cemetery — Grove Street between Prospect and Ashmun Streets, contains such graves as Noah Webster, Roger Sherman, Theodore Winthrop, Gen. David Humphreys, Eli Whitney, James D. Dana, Samuel F. B. Morse, Lyman Beecher, and Charles Goodyear. This is one of the first cemeteries in the world to be divided into family plots. Open all year; free.

Hopkins Grammar School — (1660). A preparatory school for boys. It originated as the Towne School in 1646, the first in Connecticut and the third oldest in America. A faithful replica of the original building has been reproduced on the grounds of the present school, made of wood taken from 300-year-old homes in West Haven and Cheshire.

New Haven Colony Historical Society — 114 Whitney Ave. 24 rooms of exhibits of early history and art and relics, including Eli Whitney's Cotton Gin and Webster's writing desk; open Monday to Friday 9-12, 1-5, Sundays and holidays 2-5, closed Saturdays; free.

Pardee-Morris House — 325 Lighthouse Road (1680-5), partially burned by British in 1779, period antiques, coach and gig, colonial herb garden, antique dolls and toys; open May 1 to Nov. 1, 10-5, Sunday 2-4, closed Monday; free.

Southern New England Telephone Company — 227 Church Street, a museum of the earliest telephones ever used, and exhibits of telephones of the future; open weekdays 11-3 and by special appointment for groups; free.

Southern Connecticut State College – 501 Crescent Street; tours of science building, including planetarium, fine arts building, College Memorial Union and other places of interest on the campus may be arranged by writing to the Director of Public Relations.

West Rock Nature Center – Wintergreen Ave., West Rock Park, zoo, nature house, 40 acres of trails, ponds and picnic area, historic Judges' Cave; open 9-one hour after sunset, daily; free.

Winchester Gun Museum – 275 Winchester Ave., over 5,000 items including firearms from 15th Century to today, bayonets, gun locks, powder horns, flasks, bullet molds, loading tools, cartridge boxes, bandoliers, U.S. military arms, complete Winchester line from 1866; open daily Monday to Saturday; free.

Yale University – (1701). Guide service during termtime at 11 on Saturdays, 1:30 and 3 on Sundays; during the summer at 10:30, 1:30 and 3:00 Monday to Saturday, 1:30 and 3:00 on Sunday, tours originate at Phelps Hall on the Old Campus (College Street) and last 1 hour, special tours available; free.

Yale University Art Gallery – (1831). Earliest university gallery in America, one of world's great collections of art from early Greece and Rome, Near and Far Eastern art, European, African, South American and American art from early times to the present, including furniture, silver and the originals of Col. John Trumbull's paintings of the American Revolution (later copied by the artist for the Capitol in Washington); open weekdays 10-5, Sunday 2-5, closed Mondays, Thanksgiving, Christmas Day, New Year's Day, Memorial Day and July 4th; free.

Yale Collection of Musical Instruments – 15 Hillhouse Avenue, ancient decorated and unusual harpsichords, lyres and other instruments; open to the public on Sunday 2-5; free.

Yale University Library – (Sterling Memorial Library), America's fourth largest library with over 4,300,000 volumes, changing exhibits, the Gutenberg Bible, the "Yale Library in 1742" and the Babylonian, Benjamin Franklin, German Literature, and Western Americana collections are of special interest; exhibits open 8:30-5 Monday to Friday (library open at other times for study and research), closed Saturdays and Sundays during summer; free.

Rare Book and Manuscript Library – To be opened in 1963, to have changing exhibits of historical and literary documents; open 8:30-5 Monday to Friday; free.

Yale University Peabody Museum of Natural History – Whitney Avenue and Sachem Street, geologic and biologic displays, including dinosaurs and fossils, anthropology, natural history of Southern New England, life-like dioramas of animals in natural habitat (on third floor), famous mural "The Age of Reptiles" and new mural of "The Age of Mammals," world's largest turtle fossil, Gargantua's skeleton, North and South American Indian clothing, objects and weapons, etc.; open March to October 9-5, November to February 9-4:30, Sundays and holidays 2-4:30, closed July 4, Thanksgiving, Christmas and New Year's Day; free.

NEW LONDON

Joshua Hempstead House — (1678). Oldest surviving house in New London, faithfully restored and furnished; open daily May 15 to October 15, 10:30-12, 1-4:30, Sunday 2-5; 50c.

Lyman Allyn Museum — 100 Mohegan Avenue, early American and English furniture, silver, costumes, paintings, early Chinese and American ceramics, dolls and toys, Mediterranean antiquities; open all year, 1-5, Sunday 2-5, Tuesday evening 7-9, closed Mondays, Good Friday, July 4th, Thanksgiving and Christmas; free.

Deshon-Allyn House — (1829). By appointment at the Museum; free.

Old Town Mill — 32 Mill Street, near Main, is an old grist mill, built about 1650 by Governor Winthrop, founder of New London, rebuilt in 1712. The water wheel is still in place.

Shaw Mansion — (1756). Headquarters of the New London County Historical Society, antiques, historic records, "Connecticut's Naval Office during the Revolution" it was visited by Washington and frequently by Nathan Hale, located at Bank and Blinman Streets; open all year except Sunday and Monday, 1-5; 50c.

Connecticut Arboretum — Williams Street at Connecticut College, 70 acres of virgin forest and collection of trees and shrubs native to Connecticut, now amounting to 300 varieties; free.

Ocean Beach Park — A ½ mile beach of some of the whitest sand in New England with facilities for swimming, boardwalk and bathhouses and exhibition swimming pool, food snacks, special events.

U.S. Coast Guard Academy — Visits can be made to the buildings and vessels, including the cadet training ship EAGLE (a sailing bark), and the Perham collection of small arms and other weapons, a section of chain which was stretched across the Hudson River at West Point, N.Y. to stop the British fleet during the Revolution; battalion review is held at 3:30 on Thursday during April, May, October and November; open daily 9-sunset; free.

Whaling Museum — 224 State Street in the Mariner's Savings

	Bank, interesting collection of implements and pictures; open during banking hours; free.
NEW MILFORD	**Historical Society** — Portraits and exhibits; open Monday, Tuesday, Friday and Saturday, 2:30-5.
	Housatonic Gorge — Route 133 about 2½ miles below New Milford, the river cuts through quartz, mica and hornblende; Falls near the bridge a favorite camping and hunting ground for the Indians; *Lovers Leap* is where tradition has it that Chief Waramaug's only daughter Lilinoah and her white lover plunged to a watery grave. There are picnic grounds and an Indian Spring.
	Mica Quarry — Northwest of Merryall and south of Peet Hill, Route 129 north, is an abandoned quarry whose dumps have some interesting minerals; the quarry produced some beryl, tourmaline garnet, columbite, gem garnet, aquamarines, helidor and uraninite.
NEWINGTON	**John Whaples House** — East of the Green (1729), is preserved by the town.
NEWTOWN	**Cyrenius H. Booth Library** — Contains interesting historical rooms.
NIANTIC	**Lee House** — 18th Century furniture; open all summer; contributions.
NOANK	**State Lobster Hatchery** — Open all year; free.
NORFOLK	**Battell Memorial Chapel** — Has Tiffany windows representing the four seasons.
	Stoeckel Estate — A summer art and music school for Yale University with frequent concerts and exhibitions.
	There are many country roads where it is possible to go on horseback or in a carriage without meeting motor vehicles.
	Haystack Mountain State Park — 287 acres north of Norfolk, contains Haystack Mountain (1,680 ft.) and offers fishing, picnicking and winter sports.
NORTH BRANFORD	**Warham Williams House** — Route 15 and North Branford Road (1750). One of the best examples from the Colonial period, the doorway pilasters support a pediment in the form of a broken scroll, terminating at each end in a carved rosette.
NORTH CANAAN	**Samuel Forbes House** — Route 101 East, passing Blackberry River which supplied power for the former iron industry (1770), home of the Squire who was a pioneer ironmaster. Nearby is the site of his forge and slitting mill. Ethan Allen acted as bookkeeper in this plant for several years before going to Vermont.
NORTH HAVEN	**Brickyards** — U.S. 5A, south beyond the RR crossing, a side road leads to a good exhibit of the varied clays utilized in brick-making. They were deposited in a glacial lake and show alternate light and dark layers, each double

layer representing one year of deposit. The clay is from 10 to 30 feet in depth.

N. STONINGTON

Lantern Hill – A rugged mass of quartz rock rising to 580 feet. This shining summit was a landmark for sailors at sea. The Pequots used it as a lookout and the colonists later used it to signal from during the Revolution. The view from the summit covers five states. A Pequot reservation lies south of the hill.

NORWALK

Pepperidge Farm Inc. – Collection of Colonial items, miniature rooms and model of a grist mill; open Sunday 10-4 (call a week ahead for group tours); free.

The Rocks – East Avenue and Lake Street, a mass of boulders where a battle was fought during the burning of the village; an old Indian cave is nearby.

"Yankee Doodle" House – East Avenue near Hendricks Avenue, the cellar of Governor Thomas Fitch's home, where the author wrote the famous poem which became the Revolution's marching song.

NORWICH

Joseph Carpenter Silversmith Shop – (1772). Has a gambrel roof and old shutters, interior is arranged as a silversmith's shop of the period; free.

Leffingwell Inn – 344 Washington Street (1675), a museum and scene of Revolutionary War councils; open Tuesday to Saturday 10-12:30, Sunday and holidays 2-4; 50c, children with adults free.

Mohegan Park and Zoo – East on Mohegan Road, over 200 acres overlooking the city, with rose gardens; free.

Rockwell House – 42 Rockwell Street, Museum of relics and colonial antiques; open July and August, Wednesdays 2-5; free.

Slater Memorial Museum – Norwich Free Academy, oriental art, American painting, Indian and marine items; open September to May on school days 10-4, Sundays 2-5, closed Saturdays; free.

Uncas Monument – Sachem Street, royal Indian burial ground for reigning sachems and descendants, President Andrew Jackson laid the cornerstone in 1833, Uncas Ravine slopes down to the Falls where the Yantic River sweeps over a ledge; there is a footbridge over *Indian Leap.*

OLD LYME

Florence Griswold House – Period furniture and collection of antiques; open daily except Monday 2-5 from June 20th to Labor Day, or by appointment; 50c.

OLD SAYBROOK

Richard William Hart House – (Old Saybrook Inn) built by Gen. Hart for his son; afterward it was the home of Captain Morgan, a friend of Charles Dickens, who enshrined him as Captain Jorgen, the hero in "A Message from the Sea."

ORANGE

Robert Treat House – Route 121 north of Milford, wing of the present house was set with a compass so that the shadow cast by the chimney would furnish the men working in the fields with a reliable noon mark.

OXFORD

Hudson House – Has a central chimney, good doorway, and a fine ornamental frieze of applied molding. It is located in the village.

PLAINFIELD

A visit to Plainfield Village brings one to elm-shaded streets past many Colonial houses and inns, including the *Plainfield Academy,* started in 1778, whose present building was erected in 1825.

PLAINVILLE

John Cook Tavern – Route 72, New Britain Ave. (1750), with barn attached,is a good example of Colonial architecture and has one of the finest ballrooms in New England; open to visitors.

PLYMOUTH

Buttermilk Falls – A picnic ground near *Jack's Cave,* about ¾ of a mile away; the cave has a passage 10 feet wide and 20 feet long, leading into a solid rock room which was used as a sleeping room. It was inhabited as late as 1830 by three Indians and named after their leader Jack. Not far away is another known as Indian Jack's East Cave.

Eli Terry, Jr. Water Wheel – In Terryville (1824). The massive wheel has been sheltered and opened to the public by the American Clock and Watch Museum.

POMFRET

Hillandale Handweavers – A mile off Route 169 between Routes 6 and 101, offers an opportunity to watch woolen fabrics being woven on hand-operated looms, Monday to Friday 9-3:30; free.

Mashamoquet Brook State Park – East of Abington on Route 44, contains the *Putnam Wolf Den,* a recreational area, swimming facilities, picnic grounds and camping area in its 628 acres.

Pomfret School – On a hill to the north (1894), this preparatory school for boys contains a group of red brick buildings in Colonial style and a fine Norman Chapel.

Putnam Wolf Den – From Route 93 go southwest on a country road, in the Mashamoquet Brook State Park; where Israel Putnam was supposed to have crawled in and pulled a wolf from its lair. Here the gray Devonian granite overlies the sedimentary schist which has weathered away, leaving a cliff of the harder granite. Angular blocks of granite broke off to form rock shelters, of which the wolf den is one.

PORTLAND

Brownstone Quarries – In Portland Village between Route 15 and the river. The fine-grained sandstone was used from earliest days and supplied most of the brownstone fronts for New York City. Sun-cracks show that the sand was laid down in a semi-arid climate. Many dinosaur footprints have been found here, and there are traces of them on some of the slabs scattered over the fields at the northern end of the quarry area.

Strickland Quarry — The "mineralogist's paradise" is east on Summer Street, 1½ miles, up Collins Hill. It has been visited by mineral collectors from many states. It is a deep quarry, cut in a dike of pegmatite and a location of great beauty in which about 25 varieties of minerals have been found.

PRESTON

Jonathan Brewster Grave — Son of Elder Brewster of the "Mayflower," Jonathan and his wife came to Plymouth in the "Fortune" a year later and was in charge of the trading post near Windsor. In 1650 he located in this section and established an Indian trading post which he operated until his death in 1659.

Indian Fish Weirs — Following Old Jewett City and Zion Hill Roads, opposite the Boy Scout Camp are the remains of stone dams in the Quinebaug River which were originally banked with boughs.

Rixtown Mountain — In the extreme east angle of the town, about 2 miles southeast of Route 165 is the remains of an Indian village site with some old mortars.

PROSPECT

Civil War Monument — On the Green; was erected by the State in recognition of the fact that Prospect contributed a larger proportion of soldiers than any other town in Connecticut, and more than the number of registered voters.

PUTNAM

Copp House — (1744). Built by Justice Joseph Cady, later occupied by Rev. Aaron Brown, a teacher who had tutored Rev. Manasseh Cutler, one of the most versatile men America has produced — school teacher, merchant, lawyer, minister, physician, botanist and astronomer. During the Revolution he arranged for soldiers to be paid with land in Ohio, and they settled Marietta, Ohio in 1788. Cutler drafted his famous Ordinance of 1787 for the government of the new territory.

Quaddick State Park — 118 acres, is 6 miles northeast of Putnam. Fishing, picnicking, boating and swimming.

REDDING

Putnam Memorial Camp Ground — Route 58 below Bethel town line, the "Valley Forge" of Connecticut where Gen. Putnam and a force of Conn. and New Hampshire troops encamped during the hard winter of 1778-9; gateway has two blockhouses, 203 acres still contain rows of stones which mark the chimneys of the former barracks, a stone *Colonial Museum* contains many relics, along with scenic drives and paths; open daily, May 30 to Labor Day 1-4; free (picnicking facilities available).

Aaron Sanford House — (1750). "Cradle of Methodism," because the first converts used this as their place of meeting, one of the best salt-box type of houses.

RIDGEFIELD

Keeler Tavern — Routes 33 and 35A (1760), a Revolutionary cannon ball embedded in the frame at the northeast corner may still be seen by raising a sliding shingle. A memorial building is nearby.

Main Street — One of the most beautiful in New England. It stretches nearly a mile with shaded elms, sycamores and maples, bordered by well kept lawns.

ROCKY HILL

Duke of Cumberland Inn — 69 Main Street (1767) is one of the first houses in Connecticut to be built of native brick, and is one of the finest Colonial houses in the state.

ROXBURY

Mine Hill — An early silver mine in which Ethan Allen had an interest, was used as a demonstration mine by Columbia University. Spathic iron and a fault zone contain many interesting mineral specimens. Ruins of the old smelting furnace are nearby.

Roxbury Garnet Mine — South beyond the turn to Roxbury Falls, near the Southbury line, is an open pit mine where one can find beautifully shaped crystals of brown garnet.

SALEM

Old Shingle Mill House — ½ mile west and ½ mile south of Four Corners; this early 18th Century house has a mill-dam of massive stone. The house stands in a valley known as *Elfin Glen.*

SALISBURY

Lakeville Village — Seat of one of the most important blast furnaces in Connecticut which originated in 1748 with a small forge. The handsome *Hotchkiss School* for boys (1892) is located in this village, above Lake Wononscopomuc.

SAYBROOK

St. John's School — And the Phelps House (1799) give a good view of the river and Eustatia Island. An old industry in Deep River is ivory keys and actions for pianos, made at Pratt, Read and Company, who produced ivory combs in 1809.

SCOTLAND

There are several 18th Century houses and attractive scenery and good views on Route 14, crossing the town from Windham.

Samuel Huntington House — (1731). Where the signer of the Declaration of Independence was born, later to be governor of Connecticut.

SEYMOUR

Nickel Mine — U.S. 8 north, one mile past Route 34, the mine lies ½ mile to the left, with good samples of arsenical pyrites.

Wildcat Gorge — On the west side of the Naugatuck River, 1/3 mile west of Route 8, a steep climb may be rewarded by garnets and other minerals and a fine view from the summit.

SHARON

Gov. Smith Mansion – Route 41 (1760), made of stone with a hip roof, parapet and dormers, and a pediment in front with a round "spider web" window. Noah Webster is said to have worked on his spelling book while a guest of the family.

Housatonic Meadows State Park – 440 acres 6 miles south of West Cornwall on Route 7, has picnic areas; fishing, camping.

SHELTON

Indian Well State Park – Route 110, a brook cascades through a hemlock ravine and falls into a broad pothole below overhanging cliffs – one of the most charming spots in Connecticut.

SHERMAN

Naromiyocknowhusunkatankshunk – A brook named by the Indians which drains north in the upper valley of Candlewood Lake; there is beautiful scenery in this area.

Turner Mt. Camp – Spring Lake Road, northwest from the village a trail leads west 2/3 mile to the camp from which there is a brook trail down to Great Falls, and a mountain trail to ledges with an extensive view north and east. Arrangements for use of the overnight camp are made with the Housatonic Trail Club at Sherman.

SIMSBURY

Eno Memorial Hall – Contains the Historical Society's collection of Colonial furniture and utensils; open Wednesdays 1:30-4:30; free.

Ensign-Bickford Company – Earliest and largest manufacturer of safety fuze for blasting in America. Visits by arrangement.

Hell-Hole – A deep gorge at the crest of Talcott Mt. where Capt. Wadsworth is said to have found concealment on the day after the hiding of the Charter in the Charter Oak.

King Philip's Cave – On the side of Talcott Mountain; can be seen from the highway. According to tradition, King Philip directed the destruction of Simsbury from this point on March 26, 1676.

Squantz Pond State Park – 175 acres 4 miles north of New Fairfield on Route 39, offers swimming, camping, fishing and boating.

Stratton Brook State Park – 145 acres, lies west of Simsbury off Route 167. Swimming facilities, picnicking, fishing and hiking.

SOMERS

The village stretches out on a long east and west street, with many old houses, the oldest now standing was built in 1710. East of the village the road climbs from the Central Lowland to the Eastern Highland and becomes very scenic.

Soapstone Mountain – 1061 feet elevation in Shenipsit State Forest, a mile east of the village on Route 20. There is a fine spring below the fire tower. The views extend to the mountains of southern New Hampshire and Vermont.

The drive comes out on Route 83, a mile south of the village. On the east slope of the mountain soapstone was quarried by the Indians and the early white settlers.

SOUTH COVENTRY

Nathan Hale Homestead — ½ mile south of junction of 44A and 31 (1745); completely furnished in period; Hale memorabilia china, pewter, silver and furniture; open May 15 to October 15 daily except Monday 1-5 and by appointment; 50c (children under 12, 25c).

SOUTH WINDSOR

Podunk Camp Ground — The meadow land along the Connecticut River west of U.S. 5 between the Scantic and Podunk Rivers, was the ancient camping and burial ground of the Podunk Indians and many relics have been found there. It is probably the most notable Indian campground site in the State.

Active Sand Dune — One of the largest in Connecticut is visible to the west of the highway about 2 miles after Route 15 leaves U.S. 5, northeast to the village of Wapping.

SOUTHBURY

Bullet Hill School — U.S. 6 (1778). A dignified school built of brick made on the premises, said to be the oldest schoolhouse in New England still in use. The brick work is remarkably fine.

Kettletown State Park — 485 acres 5 miles south of Southbury off Routes 6 and 202, offers camping, fishing, swimming.

SOUTHINGTON

Powers Auto Museum — Route 10, a fine collection of 66 early automobiles from 1896, of gas, electric and steam power; bicycles, antiques and oddities of early American living; open May 1 to October 1 daily 9-6, weekends only during April and October; 50c, children under 10 free.

Roaring Brook — Sandstones of the Central Valley can be seen deposited on the old rocks.

SPRAGUE

Perkins House — Going north, at Versailles Station, on the road from Baltic to Jewett City, on the south of the road is this late 18th Century house which served as a slave depot between Connecticut ports and Canada. In the cellar of one of the ells the old dungeons can still be seen, and two whipping posts stand in the yard.

STAFFORD

Stafford Springs — Known to the Indians, the iron spring is on Spring Street, about 500 feet south of Main Street, between the Church and the Public Library. Near to the spring is Hyde Park of 87 acres, a gift to the town.

West Stafford — Myron Kemp Road to the north leads in 3 miles past a hill to the right over 1100 feet high, where gold was prospected in early days.

STAMFORD

Betsy Barnum House — 713 Bedford Street, antiques and period furnishings; open Tuesday to Friday 1-4, and by appointment; 25c.

First Presbyterian Church — 1101 Bedford Street, a magnificent structure of unusual contemporary design, the abstract colored glass windows from floor to vaulted ceiling are of special interest. The Memorial wall exhibits more than 100 stones that trace the entire history of Christendom; open Monday to Friday and holidays 9-4:45, guided tours Saturday and Sunday 1-6 during spring and summer, 1-5 rest of year; free.

Stamford Museum and Nature Center – High Ridge and Scofield Town Roads, museum includes exhibits of Indian relics, minerals, geological specimens, natural history and paleontology. Also: miniature farm, nature center, planetarium, herbarium, weather station and art exhibits; open Tuesday to Saturday 9-5, Sundays 2-6; free (25c parking fee). Planetarium: adults 50c, children 25c (children below 7 years not admitted).

STERLING

Sterling Fire Tower – On Ekonk Hill, Route 95 south from the Village, has a complete horizon view.

Sterling Pound – A mile north from the Village is the Pound which was laid out in 1722 and restored by the Highway Department into a picnic area, with two old millstones from a neighboring mill used as table tops. There are a number of old houses in the Village of Sterling.

STONINGTON

Old Lighthouse – Stonington Historical Society exhibits of portraits, whaling gear and other exhibits; open July 1 through Labor Day, 11-4 daily except Monday; adults 50c, children 25c.

STORRS

University of Connecticut – Library, agricultural laboratories, engineering, fine arts and other buildings of interest.

STRATFORD

American Shakespeare Festival Theatre – During the summer Shakespeare's plays are performed in an almost acoustically perfect building, modeled after the old Globe Theatre. It is located on a 12-acre site overlooking the Housatonic River, summer tours take place Saturday and Sunday 2-5.

Judson House and Museum – 967 Academy Hill (1723), early Americana, china, dolls, clothing, coins and exhibits; open May 1 to Labor Day on Wednesday, Saturday and Sunday 11-5, Labor Day to May 1 on Thursday, Friday and Saturday 1-5, or by appointment; 75c, children 25c.

SUFFIELD

Suffield Village – Route 75 north from Windsor, has several good Colonial houses: *Timothy Phelps House* has a good porch, Palladian window and heavily molded cornice; the *Luther Loomis Place* has fine interior woodwork; *Abraham Burbank House* (1736) has a gambrel roof and a notable barn (1790). There are also the *Harvey Bissell House*, the *Gay Manse* (1742) and the *Gay Mansion* (1795), which is the most pretentious house.

TERRYVILLE

Clock Works of Eli Terry – Pioneer clockmaker, are still running in the belfry of the Congregational Church (now driven by electricity), they are made of wood.

THOMASTON

Seth Thomas Clock Company — Begun in 1812. Mr. Thomas was formerly associated with Eli Terry whose "patented wood shelf clock" made Terry famous "and many others rich."

THOMPSON

Samuel Watson House — (1767). Is at the northeast corner of the Green. One mile east of the village is Fort Hill, an old Indian fort, which gives a fine view in all directions.

TOLLAND

Forest Museum — Route 74, it is maintained in an old homestead and has specimens of various woods, demonstrations of tree diseases, forestry tools and firefighting equipment.

TORRINGTON

Birthplace of John Brown — Famous abolitionist, is on Pothier Road near the site of the old Indian fort on Route 4.

Burr Pond State Park — 437 acres, is off Route 8 in Burrville. Swimming, boating, fishing, picnicking and camping.

Gail Borden Farm — Where Miss Borden made the first condensed milk in 1857, in a factory building located on Route 8 going north to Winsted.

Turner Museum — Displays and changing exhibits; open May through October, afternoons; free.

UNION

Breakneck Pond — Route 15, has Indian burial grounds, and caves on the east bank.

Pre-Cambrian Schists — 1 mile past North Ashford on Route 198 is Bigelow Pond. Just west of this point are exposures of some of the oldest rocks in Connecticut. In the blasted road cut, iolite has been found — bluish, semi-transparent crystals, which have been cut as gems.

Yale Demonstration Forest — A large area maintained by Yale's Forestry School for experimental purposes, and training.

Bigelow Hollow State Park — 513 acres east of Union off Route 198, borders Mashapaug Lake and contains Bigelow Pond. Boating, fishing and picnicking.

VERNON

Congregational Church — (1826). Has a Doric portico and a graceful octagonal spire which is a landmark for many miles.

Old Milestone — In front of the Tolland County Home shows the route of the old turnpike.

VOLUNTOWN

Green Falls Pond — Shows an unusually fine development of aquatic plants. There is an attractive ravine below the Pond.

Line Meeting House — At Ekonk, where one enters the town of Sterling, is the House which stands in two towns and two counties. A couple cannot legally be married in front of the pulpit, for the groom would be standing in one town and the bride in another.

WALLINGFORD

Choate School — A well-known preparatory school for boys, there are exhibits in the Morgan Library; free.

Samuel Parsons House — 180 South Main Street (1759), the Wallingford Historical Society has arranged exhibits and displays of relics and Colonial material; open year round on Sundays 2-5 and by appointment; free.

Nehemiah Royce House — North Main Street (1672), is also known as the Washington Elm House, antique furniture and relics; open July and August weekdays 3-5; free.

Wharton Brook State Park — 106 acres, is south of Wallingford on Route 5. Winding brooks and shade trees. Swimming, picnicking.

WAREHOUSE POINT

Conn. Electric Railway Trolley Museum — North Road, Route 191; 21 electric street cars, open bench cars, steam and railway equipment, mile of operating track; open May 30 to November, Wednesday, Saturday and Sunday, 1-dusk; free; rides on Sunday from 2, adults 25c, children 5-12, 10c, under 5, free.

WARREN

Congregational Church — (1818). Has a pilastered pediment, a good tower and fine interior woodwork. It sent 16 young men into the ministry, including an early leader of Oberlin College, Charles G. Finney, and Julian M. Sturtevant who founded Illinois College.

WASHINGTON

Gunnery School — (1850). A preparatory school for boys is near the *Gunn Library* with murals by Mowbray, a collection of Indian relics, and Colonial material; open Monday, Tuesday, Thursday, Friday 2-5, Saturday 9-12, 2-5; museum open Tuesday, Thursday, Saturday 2-5; free.

WATERBURY

Mattatuck Historical Society — 119 West Main Street, historical exhibits of china, glass, period rooms, pottery, Connecticut glass, Indian and industrial exhibits, Whistler etchings, pioneer items; of further interest is the *Junior Museum,* with an apothecary shop, small post office and rolling stock; open September through June, Tuesday through Saturday 10-5, Sundays 2-5; free.

WATERFORD

Harkness Memorial State Park — Italian style mansion of 42 rooms, has more than 900 Rex Brasher bird paintings owned by the State of Connecticut, and formal gardens; 40 servants were once needed to maintain the beautiful estate; open daily May 25 to October 1; 50c, children under 12 25c, children under 7, free.

WATERTOWN

Taft School — A preparatory school with a fine library and student buildings. There are several old homes around the Watertown Green.

Black Rock State Park — 451 acres, is on Routes 6 and 202 near Thomaston. Scenic Sand Dam Pond at foot of Black Rock.

Swimming, fishing, picnicking and camping.

WESTBROOK **Bushnell House** — U.S. 1 (1678), once owned by an uncle of David Bushnell, inventor of the torpedo and submarine, the house has been restored as a museum. It contains parts of Bushnell's submarine model.

WEST HARTFORD **Children's Museum of Hartford** — 950 Trout Brook Drive, exhibits of Colonial, primitive and oriental peoples, gardens, geological exhibits of fossils, dinosaur tracks, minerals, marine exhibits, mounted birds, miniature animals; open daily 9-5, Sundays 2-5, closed weekends during July and August, and closed holidays; free.

Elizabeth Park — 915 Prospect Avenue, one of the world's most beautiful rose gardens, usually at its peak late in June. There are 10,000 plants of 500 varieties; picnic facilities, free.

Noah Webster Birthplace — 215 So. Main Street (1676), a typical salt-box house was the lexicographer's home until he entered Yale College.

WEST HAVEN **Burwell Hill** — Off Derby Turnpike, a drumlin or rounded mass left by the glacier, with a good view of New Haven and the Sound.

WESTON **Devil's Gorge** — Route 105, a beautiful pass where the river rushes down between high cliffs, with many waterfalls.

WESTPORT **Mid-Fairfield County Youth Museum** — Woodside Lane, sanctuary for undisturbed wildlife and plants; museum lectures arranged for groups without charge on topics of natural history, weather, rocks and minerals, conservation, insect life and others; open 10-4 except winter; groups should call ahead for reservations.

Sherwood Island State Park — 203 acres, is south of Westport on Long Island Sound. Swimming, picnicking, fishing.

WETHERSFIELD **Buttolph-Williams House** — (1692). Well restored with complete period furnishings and "ye Greate Kitchin"; open May 15 to October 15 daily 12-4:30; 50c, children 25c.

Old Academy Museum — 150 Main Street (1801), items of the 1600's and 1700's include books, manuscripts, farm and household tools, textiles, china and glass, and a full-sized loom in operation, with implements to prepare fibres for spinning and weaving.

Silas Deane House — Main Street (1776), an unusual feature of a large, square hall is found at the righthand corner, bringing the main doorway to the right of the front. A piazza was added by later owners. The house is now being restored.

Webb House — Main Street (1752), Washington and Rochambeau met here in 1781 and made plans which led to the surrender of the British at Yorktown; fine paneling, furniture, china, textiles, Gentleman's Library; open March to November 10-5 daily, Sundays 1-5; December through March 10-3, closed Sundays; adults 75c, high school students 50c, junior high and elementary pupils 25c, preschool children 10c, special rates for groups of 10 or more.

WILLINGTON

David Lillibridge House — North part of town, a big house with large fireplaces and fine paneling. The attic is reached by stone steps which are part of the chimney, and a brick smoke-house connects with the main chimney flue.

WILTON

David Lambert House — Junction of Route 7 and Route 33 (1725), an early tavern pictured in Wallace Nutting's "Connecticut Beautiful."

Scott Homestead — Route 33 at Bald Hill, route of Gen. Tryon's retreat, has a Revolutionary cannon ball imbedded in the wall of the house.

WINCHESTER

Old Grist Mill — Operating with millstones and a water wheel, on U.S. 8 up Still River.

WINDHAM

Public Library — Has several relics, including a wooden statue of the god Bacchus, carved by British prisoners during the Revolution.

WINDSOR

Elmwood — 778 Palisado Ave. (1740), home of David and Oliver Ellsworth, earliest example of central hall type of house, with furniture, books and china; open May to December Tuesday, Wednesday, Friday, Saturday 1-5; contributions.

Walter Fyler House — 96 Palisado Ave. (1640), Windsor Historical Society, exhibits of the home and garden May 15 to October 15, Tuesday to Friday 12:30-4:30 and by appointment; 25c.

Loomis Homestead — Island Road (1639), located on the grounds of the Loomis School for Boys, maintained by the Loomis Institute, its leaded windows were melted for bullets for the War of 1812. Its walled cupboard is probably the oldest one in the country; many antiques and one of the earliest imported firebacks from England; open by appointment.

Landing Place — A boulder on the grounds of the Loomis Homestead near the mouth of the Farmington River, marks the landing place of the Plymouth Trading Company in 1633. The land between here and the center is still known as Plymouth Meadow.

WINDSOR LOCKS

Airport — The largest airfield in the State with observation facilities and restaurant.

Stream Terraces — On U.S. 5A going north, are examples of where the Connecticut River has cut through glacial drift. Each terrace represents a former level of the lake. The highway runs along the railway and the former canal.

WINSTED

Solomon Rockwell House — (1813). Lake St. and Meadow St., Winchester Historical Society, antiques, the Barn is a gem of late Colonial architecture; open daily except Sunday and Monday, June 1 to October 1, 2-5; free.

WOLCOTT

Mad River Reservoir — Open to the public, a road turns right ½ mile to a hamlet with the Indian name *Woodtick,* where there is an interesting *Stone Schoolhouse* erected in 1825. The *Wilcox House,* nearby, was built soon after the Revolution.

WOODBRIDGE

Woodbridge Town Library — (Clark Memorial Building) has a small exhibit of old style matches made by Wm. A. Clark and his successors in Woodbridge.

WOODBURY

Glebe House — Hollow Road near Main St. (1690), "birthplace of American Episcopacy" where the first American Episcopal bishop was chosen in 1783; original paneling, furniture, documents of historical interest; open all year on weekdays 10-5, Sundays 1-5, closed Wednesdays; contributions.

WOODSTOCK

Hatchet Pond — In the northwest corner of the town, best reached through Union, was an early Indian reservation where many relics have been found, including an undisturbed Indian cemetery.

Rev. Jedediah Morse House — (1761) whose school geographies were almost as important as Webster's spelling-book. He was the father of Samuel F. B. Morse, inventor of the telegraph and a famous painter.

Quasset School — (1748). Oldest one-room "little red schoolhouse" in continuous use in the United States, home-made bricks and hand-hewn timbers; during school session in South Woodstock, school key can be obtained from the principal.

ADDENDUM

TRUMBULL

Tungsten Mine — 1/3 mile north of Long Hill R.R. Station, near the summit of the river bluff, is the mine which was worked until the present century for tungsten and copper ores. Some of the minerals discovered here are in museums all over the world.

Tashua Hill — 620 feet, has a remarkable view. During the Revolution it was the most important observation point along the Sound. Men with spyglasses watched for British ships and any intelligence was spread rapidly by post riders.

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